

SECTOR 1

MULL OF GALLOWAY TO MULL OF KINTYRE

Plan.—This sector describes the coast, lochs, and sounds between the Mull of Galloway and the Mull of Kintyre, including the Firth of Clyde. The descriptive sequence is from S to N.

General Remarks

1.1 The coast between the Mull of Galloway and Mull of Kintyre, two salient promontories, is steep and rocky. Bold cliffs and headlands are prevalent. Navigable arms of the sea, known as lochs and firths, indent this coast. Firth of Clyde, the most important of the arms, leads into the River Clyde which fronts the Clydeport area, including Glasgow. Local harbors are situated along the shores of the lochs. Ferries ply between many of these harbors. Extensive harbors are few within the deep-water lochs because of the mountainous terrain backing the coast.

Tides—Currents.—Information on tides and tidal currents is shown on charts of the area. The tidal currents close inshore along this stretch of coast set S on the flood and N on the ebb and at springs may attain a maximum velocity of 4.5 knots. Offshore the velocity of the current decreases, until in the middle of North Channel the rate is about 2.5 knots at springs. Overfalls and tide rips occur at several places along this coast.

Caution.—There are few off-lying dangers. Buoys mark isolated rocks and detached patches, as well as shoals in inner reaches and narrows. Several islands lying close offshore provide a lee for anchorage of small vessels. Anchorages for large ships are few within the deep-water lochs. There are numerous mooring buoys. Designated anchorages, clear of dangers, have been established in the Firth of Clyde for deep-draft ships.

Fishing for herring is conducted throughout the Firth of Clyde and adjacent areas by ring net vessels and pair trawlers. The fishing vessels are concentrated at the S end of Arran and the Ballantrae Banks from June to December. It may be impossible to avoid the fishing nets, but the vessels should be given as wide a berth as safe navigation permits. Propellers should be stopped, if possible, when passing between pairs or groups of fishing vessels.

Submarines exercise, both surfaced and submerged, in the waters within this sector.

Mull of Galloway to Firth of Clyde

1.2 Mull of Galloway (54°38'N., 4°51'W.), a bold promontory forming the S extremity of the Rhins of Galloway, is the S point of Scotland. The promontory, steep-to on its S and W sides, is connected to The Rhins by a narrow isthmus. A light, frequently obscured by haze or low-lying clouds, is shown from a tower at the SE end of the promontory.

Rhins of Galloway (The Rhins) (54°50'N., 5°00'W.), a hilly peninsula forming the SW extremity of Scotland, extends 28



Photo courtesy of Scottish Radiance
MULL OF GALLOWAY LIGHT

miles NNW from Mull of Galloway to Loch Ryan. The coast is steep-to and free from known dangers except close NW of Salt Pans Bay (54°55'N., 5°11'W.), and in the vicinity of Craig Laggan (54°58'N., 5°11'W.); it should be given a wide berth if only to avoid adverse currents and tide rips in the vicinity of headlands. Mariners are cautioned that hydrographic data is based on old leadline surveys and uncharted dangers may exist.

Beauforts Dyke (54°40'N., 5°10'W.) is a charted deep-water trench lying in North Channel W of The Rhins with depths of up to 300m.

Tidal currents run parallel to the Rhins of Galloway as far as its N extremity, where the outgoing current from the Firth of Clyde is encountered. The main current then runs toward the Mull of Kintyre and in the opposite direction when the current is reversed in the Firth of Clyde.

Caution.—An explosives dumping ground area, the limits of which are shown on the chart, lies in the vicinity of the trench. Unexploded ordnance also is reported to lie on the seabed in the vicinity of the explosives dumping ground area, as noted on the chart, and in the vicinity of the gas pipeline.

Crammag Head (54°40'N., 4°58'W.), from which a light is shown, is located 4.2 miles WNW of Mull of Galloway. A conspicuous ruined tower stands on a breakwater which is situated on the S side of Port Logan Bay, about 3.5 miles N of Crammag Head.

Portpatrick (54°51'N., 5°07'W.), a small, shallow harbor, is difficult to enter due to strong tidal currents setting across the constricted entrance. With moderate to strong SW winds, entry is impracticable. It is used by fishing vessels and yachts. The

channel has a width of 35m between drying shoals and a least depth of 0.3m lying 0.5 mile within the entrance, close NW of the leading line established from the head of the harbor.

A hotel standing close N of the entrance is conspicuous. The building of a radio station and adjacent masts standing 0.3 mile NW of the harbor entrance are conspicuous. The ruins of a castle stand near the coast, 0.5 mile SE of the entrance. Cairn Pat, the highest eminence on the peninsula, rises to an elevation of 180m about 3.7 miles ENE of Portpatrick.

Caution.—Submarine cables extend seaward from a point on the coast about 0.7 mile NW of Portpatrick and are shown on the chart.

Unexploded ordnance is charted 6.5 miles WSW of Portpatrick.

Black Head is located 1.7 miles NW of Portpatrick. Killantringan Light is shown from a conspicuous lighthouse standing on the point. Four prominent masts stand 3.5 miles N of Black Head. Kinsale Tower, 146m high, stands 0.7 mile ESE of the masts and is almost hidden by trees. A prominent monument, 123m high, stands 1.7 miles ENE of the masts and is sometimes mistaken for the tower.



Photo courtesy of Scottish Radiance
KILLANTRINGAN LIGHT

Corsewall Point (55°00'N., 5°10'W.) is the NW extremity of Rhins of Galloway. A fringing reef in the vicinity of the point extends as far as Craig Laggan with a drying rock marked by a beacon, lying 2.2 miles SSW. A light is shown from a conspicuous tower standing on the point. A helicopter landing area is situated close to the light. A prominent radio mast stands about 1 mile SSW of Corsewall Point.

Caution.—Potentially hazardous unexploded ordinance is reported to exist on the seabed both along the route of the charted gas pipeline (54°51'N., 5°45'W.) to (54°59'N., 5°11'W.) and also in the areas indicated to the N and NE of Beaufort's Dyke Explosives Dumping Grounds (54°58'N., 5°24'W.) and (54°56'N., 5°15'W.). Any activity that may disturb the seabed should not be carried out in these areas.



Photo courtesy of Scottish Radiance
CORSEWALL POINT LIGHT

1.3 Loch Ryan (54°58'N., 5°02'W.) is entered between Milleur Point (55°01'N., 5°06'W.) and Finnarts Point, about 1.5 miles ENE. The E side of the entrance is formed by steep cliffs and the W side is low, as is the head of the loch. The port authority for the loch is situated at Stranraer, at the head of Loch Ryan.

A monument atop a high hill within the W side of the loch, and a church tower at the head of the loch, are both conspicuous. A radio mast stands 0.7 mile SSW of Milleur Point and is prominent. A lighted buoy, moored about 0.2 mile NE of Milleur Point, marks foul ground extending seaward from the point.

Tidal currents are rotary in the loch entrance. Within the entrance the current runs parallel to the fairway. Northwest gales raise a sea at the entrance and in the outer part of the loch.

Loch Ryan, 7.5 miles long, has a width of about 2 miles throughout its inner half. There is a least depth of 7.3m in the fairway to a position off Cairn Ryan Ferry Terminal. South of the terminal, a least depth of 5.2m exists in the fairway to a position off the entrance to the dredged channel. The fairway in the vicinity of Cairn Point (54°58'N., 4°02'W.), from which a light is shown, is restricted to a width of 300m by fringing shoals which become quite extensive as far as Leffnoll Point, 2 miles SSE of Cairn Point. A channel, 100m wide, and the basin between East Pier and Ross Pier have been dredged to 5m for a distance of 2.5 miles N from Stranaer Harbor entrance. Three lighted beacons mark its W side. Anchoring is prohibited in its vicinity.

The Spit (54°57'N., 5°02'W.), a partly drying tongue, extends SE to the fairway from Kirkcolm Point (54°58'N., 5°03'W.), located opposite Cairn Point. A lighted buoy marks the SE end of The Spit.

1.4 Cairn Ryan (54°58'N., 5°01'W.) (World Port Index No. 33575), a jetty extending 570m SSE from Cairn Point, has depths of 3 to 8.3m along its SW side. The jetty is in a state of disrepair and is unsafe for berthing. The seabed is foul from shipbreaking activity in this area.

Tidal currents in the vicinity of the wharf set obliquely on or off the wharf.

The Ferry Terminal is situated about 0.7 mile SSE of Cairn Point and is protected from N by a short breakwater. There are two berths on the SW and NW sides of the terminal, each of which provides a ro-ro facility.

Pilotage is not compulsory, nor are licensed pilots available. A navigating officer with local knowledge is available and can be contacted through Stranraer Port Radio Station. Ships are met off Milleur Point.

Stranraer (54°54'N., 5°02'W.) (World Port Index No. 33570), a resort town, is situated at the head of Loch Ryan. Its shallow drying harbor, which is enclosed by two converging piers, has an entrance 240m wide.

Winds—Weather.—During NW winds, the heaviest seas develop close seaward of the entrance, off Millieur Point, especially during the N tidal current. Within the loch, winds from the N and NE are reported to be the most dangerous.

Tides—Currents.—Tides rise about 2.8m at springs and 1.9m at neaps.

Depths—Limitations.—Ross Pier lies within the harbor, 100m SW of East Pier. The approach to the harbor entrance and the basin between East Pier and Ross Pier are dredged to a depth of 5m. The harbor SW of Ross Pier was dredged to depths of 2 and 4.5 m in 1992.

East Pier has a dredged depth of 5m alongside the outer 130m on its SW side. Another berth exists on the NE side of the pier, where an area 120m long and 15m wide, has been dredged to a depth of 4.5m.

Ross Pier is 175m long and can accommodate ferry vessels of up to 7,000 tons. There is a ro-ro terminal at the root of the pier.

West Pier has a berth on its E side, about 70m long, which is generally used for fishing vessels.

The port can accommodate vessels of up to 128m in length having drafts of up to 5m at East Pier.

Aspect.—A prominent church tower stands on the W side of the town. Agnew Monument stands on the skyline to the W of the loch.

Pilotage.—Pilotage is not compulsory. Licensed pilots are not available, but a local navigating officer can be made available on request, and boards near Milleur Point lighted buoy

Regulations.—Special regulations are in force for vessels carrying petroleum and carbide of calcium. The port authority should be contacted with regard to these regulations prior to arrival.

Anchorage.—Anchorage can be taken in depths of 4.1m, mud, about 0.5 mile N of East Pier.

Lady Bay (55°00'N., 5°05'W.) is sheltered from all except NE winds.

Caution.—Foul ground is located in position 55°00'18"N, 5°03'42"W.

Firth of Clyde and Approaches

1.5 Firth of Clyde (55°19'N., 5°00'W.) is approached between Corsewall Point and the Mull of Kintyre, 28 miles NW. About 20 miles within the entrance lies Arran Island (55°30'N., 5°13'W.), dividing the waterway into Firth of Clyde and Kilbrannan Sound. At the inner end of the sound lies Inchmarnoch Water, which is connected to the Firth of Clyde by Bute Sound. The entrance to the firth lies between Turnberry Point (55°19'N., 4°51'W.) and the SE end of Arran Island.

Ailsa Craig (55°15'N., 5°07'W.), a rocky, steep islet accessible only on its NE side, lies in the seaward approach to the Firth of Clyde. It rises to an elevation of 337m and is a good radar target. A light is shown from a prominent tower standing on a spit at the E side of the islet. A small pier is situated close NW of the tower.

Winds—Weather.—Strong S and W winds raise the water level in the Firth of Clyde and N and E winds lower the level. These changes are greatest in the inner firth and entrance to the River Clyde, especially with SW winds.

Tides—Currents.—The flood current expands after passing the Mull of Kintyre and its NE part impinges on Bennane Head (55°08'N., 5°00'W.), where it divides. One branch sets NNE along the Ayrshire coast where it is rather weak in the outer firth, becoming stronger within the firth as it runs parallel to the coast. Velocities increase during springs off salient points and in constricted channels. The currents divide around the Cumbrae Islands, becoming weak to the head of the firth. Detailed information is shown on charts of the area.

Depths—Limitations.—There are few charted dangers. Rocky ledges fringe the coasts for as far as 0.5 mile in places. Depths in the firth will permit entry of deep-draft vessels. The upper firth is constricted at its entrance by the Cumbrae Islands.

Signals.—Numeral pendants of the International Code of Signals should be displayed by those vessels approaching or passing through a recommended channel, or bound for Holy Loch (55°59'N., 4°55'W.), as follows:

Channel/Loch	Pendant
Firth of Clyde Channel	1
Skelmorlie Channel	2
River Channel	3
Ardmore Channel	4
Loch Long Channel	5
Holy Loch	6
Kilcreggan Channel	7

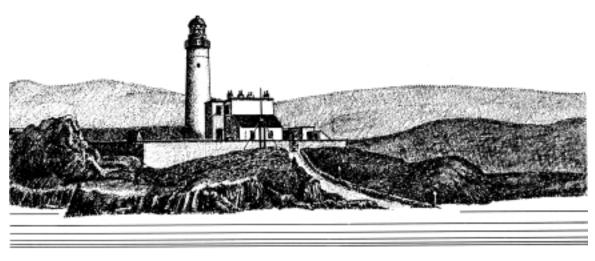
There is no signal for Hunterston Channel.

The First Substitute should be displayed by vessels about to leave the channel and proceed to anchor.

Caution.—Submarines carry out maneuvers in the Firth of Clyde and the approaches to adjacent lochs and sounds.



PLADDA (FOREGROUND) AND AILSA CRAIG (BACKGROUND) FROM NW



TURNBERRY POINT LIGHT FROM N

Vessels navigating in the recommended channels should be considered to be in "narrow channels" within Rule 9 of "Navigation Rules (72 COLREGS)."

Skelmorlie Channel is a one-way channel for vessels with drafts greater than 15m.

Firth of Clyde—East Side

1.6 Finnarts Point (55°02'N., 5°03'W.) marks the E entrance of Loch Ryan. The coast NNE of the point is steep and cliffy. Two towers and a bridge about 4.5 miles NNE of the point are conspicuous.

Bennane Head (55°08'N., 5°00'W.) is a salient, rounded and steep-to headland, off which tidal currents converge causing tide rips which extend at least 1 mile off the head. Detached

shoal patches lie as far as 3.5 miles offshore. A prominent silo stands 0.2 mile ESE of the point.

Girvan Harbor (55°15′N., 4°52′W.) is shallow, formed by breakwaters, and fronted by foul ground. Coasters, with local knowledge, fishing vessels, and pleasure craft use the harbor in which silting occurs. The entrance channel has a controlling depth of 1.5m, however, depths over the bar vary with freshets and changes in wind. Vessels of up to 50m in length, 9m beam, and 3.5m draft may be handled at HW. A prominent slender spire stands close E of the harbor. A conspicuous radio mast and a conspicuous television tower stand close N and 3.5 miles E, respectively, of the town.

Turnberry Point (55°19'N., 4°51'W.) is a low, but conspicuous promontory. A castle, in ruins, stands at the NE side of the point which is marked by a cairn. A light is shown

from a tower, 24m high, situated near the ruins. Brest Rocks extend up to 0.5 mile offshore 1 mile S of Turnberry Point and are marked by a beacon.

Barwhin Point (55°21'N., 4°48'W.) divides Maidenhead Bay and Culzean Bay, the former encumbered with foul ground; the latter has a castle standing near the cliffs at its S end. From the point, the coast, forming the E side of the outer part of the Firth of Clyde, recedes to form Ayr Bay and Irvine Bay. The shores of these bays are fronted by shoals and rocky patches extending as far as 3 miles offshore.

Dunure Harbor (55°24'N., 4°45'W.), a fishing harbor formed by two breakwaters, has a depth of 2.7m at HW. A tower marks the SW side of the entrance. Three radio masts stand on a hill about 2 miles E of the harbor.

Heads of Ayr (55°26'N., 4°42'W.), a broad and conspicuous headland consisting of steep, vertical cliffs, rises 2 miles NE of Dunure.

Ayr Bay (55°30'N., 4°40'W.), entered between the Heads of Ayr and Troon Peninsula, 6.5 miles NNE, is cluttered with numerous shoal patches. The Ayr River flows into Ayr Harbor, formed by two breakwaters. The conspicuous ruins of a castle stand on the edge of a cliff 1.5 miles ENE of the Heads of Ayr. Black Rocks, above and below-water rocks, lie in the N part of the bay about 3.5 miles N of Ayr.

Lady Isle (55°32'N., 4°44'W.) is fringed by reefs and encircled by shoals. Two towers stand on the isle and a light is shown from a conspicuous white beacon.

Caution.—Shallower depths than those shown on the chart may be encountered in this part of the bay. The passage between Lady Isle and the coast E should only be traversed by small vessels with local knowledge.

A spoil ground area lies 1.7 miles S of Lady Isle and may best be seen on the chart.

1.7 Ayr Harbor (55°28'N., 4°38'W.) (World Port Index No. 33560), at the mouth of the Ayr River, is protected by a pier and detached breakwater at the entrance. Ayr Harbor is formed by the banks of the River Ayr, which are quayed at the mouth of the river, and by Griffen Dock, a tidal basin which extends NE from the inner end of the entrance channel. The port is a fishing and industrial complex which handles the transport of scrap metal, coal, fertilizer, timber, and cement.

Winds—Weather.—Winds from W raise a swell at the harbor entrance. After heavy rains a strong current flows through the entrance setting vessels off course. Fresh S winds raise the water level, and N and NE winds lower the water level.

Ice.—Ice in the harbor is carried to sea by the ebb current.

Depths—Limitations.—The least charted depth on the range line over the bar is 3.6m lying 0.3 mile W of South Pier Light. The width of the channel between the pier and breakwater is 80m. North Quay has a length of 270m and an alongside depth of 6.2m at HW. Vessels of up to 110m in length, 6.4m draft, and 5,000 tons can be handled at the river berths.

Aspect.—Lights in range, bearing 098°, lead through the approach fairway. The spire atop the Town Hall on the S bank

of the river is prominent. A gas tank and the Pavilion Building stand about 0.5 mile ENE and 0.5 mile SSE, respectively, of the harbor entrance and are conspicuous.

Pilotage.—Pilotage is compulsory for vessels exceeding 65m in length. An ETA should be sent 24 hours in advance. The port can be contacted by VHF. Pilots board near the St. Nicholas lighted buoy which is moored close S of the range line, 0.4 mile W of the entrance.



AYR HARBOR

Irvine Bay (55°36'N., 4°45'W.) is formed by the coast extending NW from Troon Peninsula (55°33'N., 4°41'W.) to a low, but prominent headland on which is situated the town of Ardrossan (55°39'N., 4°49'W.). The Irvine and Garnock Rivers flow into the bay through a common mouth. Dangers in the bay are contained within the 20m curve which lies 1 to 2 miles offshore.

1.8 Troon Harbor (55°33'N., 4°41'W.) (World Port Index No. 33550), easily accessible, has been artificially formed on the NE side of Troon Peninsula which divides Ayr and Irvine Bays. The primary industry is shipbuilding.

Winds—Weather.—It is reported that winds from the SW develop a very heavy sea in the approach. Strong winds from the NW, reported to be the most dangerous, develop heavy seas in the entrance.

Depths—Limitations.—There are depths of 4 to 5m in the entrance. The harbor entrance, 79m wide between pierheads, leads to the sheltered outer harbor.

West Pier, 140m long, extends N from the head of the peninsula. The largest berth has alongside depths of 5.2 to 5.8m for a length of 90m. At HW, vessels of up to 130m in length and 6.2m draft can be accommodated.

East Pier, about 900m long, projects NW and parallel to the peninsula. It was reported (1994) that East Pier was not in use.

A marina occupies the whole of the inner harbor. A tidal basin on the SW side of the outer harbor has an entrance 12m wide with a depth of 3.7m and is used by fishing vessels.

Aspect.—The approach from WNW is free of dangers. However, vessels are cautioned of the shoals that exist in the harbor. Troon Rock, 1.2 miles W of the harbor entrance, has a least depth of 5.6m and lies on the dividing line between the white and green sectors of West Pier Light, bearing 090°.

A gas tank standing 1 mile SE of the entrance is conspicuous. A large shed at the shipbuilding yard is also conspicuous.

A buoy marks the N extremity of foul ground off West Pier; however, shoal water is reported to lie up to 0.7 mile NW of West Pier.

Mill Rock, which dries 0.3m, lies 0.5 mile NE of West Pier. Lappock Rock, which dries 0.6m and is marked by a beacon, lies 1.5 miles NNW of the harbor.

Pilotage.—Pilotage is not compulsory. Pilots are available with a 24 hour advance notice on VHF.

Regulations.—Two black balls by day, or two red lights at night, disposed vertically, are displayed from a mast W of the tidal basin when the harbor is closed to shipping.

Anchorage.—Safe anchorage during gales from between SW and NW can be obtained in Whiting Bay (55°30'N., 5°05'W.).

Safe anchorage during winds from the E may be taken in Ayr Bay.



TROON HARBOR

1.9 Irvine Harbor (55°36′N., 4°42′W.) (World Port Index No. 33540) lies at the confluence of the Irvine and Garnock Rivers. The port facilities are situated chiefly on the S side of the river, 0.3 mile within the river mouth. The harbor serves an industrial complex as well as recreational craft.

Winds—Weather.—The harbor is sheltered from all winds. **Tides—Currents.**—North and S winds raise and lower the water level, respectively. These winds also induce crosscurrents across the harbor entrance.

Depths—Limitations.—The minimum depth over the bar is 0.5m. Vessels of up to 61m in length and 3.8m draft can be handled at the quays. The banks on both sides of the entrance channel have a number of jetties, whose ends are marked by perches showing the limits of the channel.

Aspect.—Range lights, bearing 051°, lead over the bar and into the harbor.

Two chimneys and the Pilot House Tower, which is white and surmounted by a signal mast, stand 2.2 miles NW of the harbor entrance and are conspicuous.

Pilotage.—Pilotage is not compulsory, although local knowledge is required. Pilots are available given 24 hours notice of ETA. The pilot boards 0.5 mile SW of the entrance.

Anchorage.—Anchorage may be taken in depths of 15 to 22m, good holding ground, seaward of the bar and NW of the harbor entrance. This anchorage is exposed to the weather.

Caution.—Several outfall pipelines extend seaward from points on the shore 1.2 miles SE, 0.5 mile NE, and 1.7 miles NE of the harbor entrance and may best be seen on the chart.

Ardrossan Harbor (55°39'N., 4°49'W.)

World Port Index No. 33530

1.10 Androssan Harbor is located on the N side of the low, salient point that marks the NW limit of Irvine Bay. The harbor is largely artificial, being protected from NW by a detached breakwater and a jetty. The latter, known as Lighthouse Pier, projects N from the extremity of the low point.

Tides—Currents.—Tides rise 2.8m at springs and 1.5m at neaps. Tidal currents off the harbor entrance are weak. Gales from the SW may cause the harbor to close.

Depths—Limitations.—There is a dredged depth of 5.5m in the entrance and general depths of 3 to 5m inside the breakwater. Vessels of up to 7.8m draft can enter at HWS and 7.2m draft at HWN. The entrance width is 115m between Lighthouse Pier and the S end of the breakwater.

Dry cargo and ro-ro vessels may berth on the W side of Eglinton Tidal Basin, at a pier, 130m long, with a dredged depth alongside of 5.5m. A tanker terminal, capable of accommodating vessels of up to 181m in length and dredged to an alongside depth of 6m, lies on the N side of Montgomerie Pier; ships of up to 20,640 tons have been accommodated at the berth. There is a passenger berth, on the NW face of Winton Pier, 137m long, with an alongside depth of 4.2m.

Aspect.—Horse Isle, low and partly grassy, lies 0.5 mile NW of Lighthouse Pier. A conspicuous stone tower stands at the S extremity of the isle which is fronted by drying and rocky spurs. A directional light is shown from a tower on the point 500m NE of the head of Lighthouse Pier.

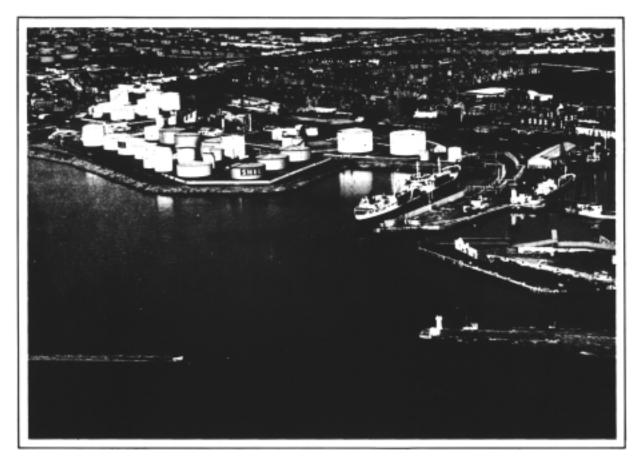
Pilotage.—Pilotage is compulsory. An ETA should be sent 24 hours in advance. Pilots board near Little Cumbrae Island (55°43'N., 4°58'W.). The pilot launch is fitted with VHF. A port radio station is situated at Ardrossan.

Regulations.—Harbor regulations are in force. There are special by-laws applicable to vessels carrying explosives and petroleum. Consultation should be made with the harbormaster prior to arrival.

Signals.—Three red lights, disposed vertically, are shown from a framework tower on top of the port control tower, situated on the S side of Montgomerie Pier, to indicate that the harbor is closed. The signal is used by day and night.

Anchorage.—Anchorage can be taken in depths of 22 to 27m, sand, about 1 mile SW of Lighthouse Pier.

Caution.—Several detached rocks lie between Horse Isle and the coast. The passage should only be used by small craft with local knowledge.



ARDROSSAN HARBOR FROM WSW

An explosives dumping ground area lies 6 miles W of Ardrossan and may best be seen on the chart.

Firth of Clyde—West Side

1.11 Arran Island (55°30'N., 5°13'W.) forms the W side of the Firth of Clyde. The island is cultivated in its S part, with rolling hills sloping to the sea. The N part of the island is mountainous, with connecting ridges intersected by deep ravines. Goat Fell, the highest peak, rises to a height of 872m about 6.5 miles S of the N extremity. The shores of Arran are low and indented to form several bays. Tidal currents set N along the E coast on the flood and S on the ebb. Velocities are weak, except at the entrance of Lamlash Harbor (55°32'N., 5°07'W.) and in the vicinity of Pladda, where strong tide rips occur when E and ebb currents meet.

Kildonan Point (55°26'N., 5°06'W.), the SE extremity of Arran, is identified by the ruins of a castle standing close inshore.

Pladda (55°26'N., 5°07'W.), is an islet lying almost 1 mile S of Kildonan Point. A light is shown from a prominent tower standing at the S end of the islet. The area between Pladda and Arran is foul.

Whiting Bay (55°30'N., 5°05'W.), an open bight, contains a jetty and a boat harbor formed by natural rock formations. Anchorage, sheltered from W winds, can be taken in depths of up to 18m, sand, less than 0.5 mile offshore, where the shores of the bay are wooded and fringed with white cottages.

Lamlash Harbor (55°32'N., 5°07'W.) (World Port Index No. 33310) indents the coast for 1.5 miles between Kingscross Point (55°31'N., 5°05'W.) and Clauchlands Point, 2.5 miles N. Holy Island, fronting the harbor, is steep-to, with grassy lower slopes and rocky cliffs forming the upper slopes.

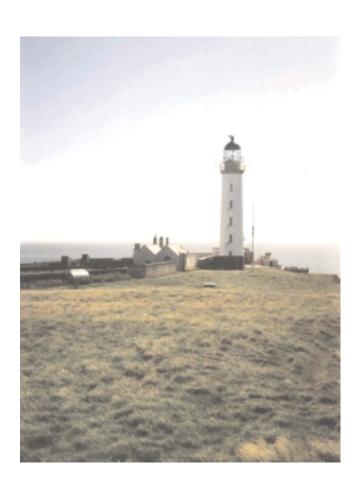
Tides—Currents.—The flood tidal current setting N along the E coast of Arran, flows into South Channel and out North Channel with a velocity of 1.5 knots. The reverse applies to the ebb current.

Depths—Limitations.—North and South Channels lead into the harbor at either end of Holy Island. North Channel has a navigable width of 1.7 miles and a least depth of 10.4m. South Channel has a navigable width of 1.7 miles and a least depth of 26m in the fairway. A lighted buoy marks the S extremity of shoals in North Channel. In South Channel, Fullarton Rock, with a least depth of 2.1m, lies close ENE of Kingscross Point and is marked on its NE side by a buoy.

Aspect.—Pillar Rock Light is shown at the E end of the island. Another light is shown from a tower at the SW



WHITING BAY AND HOLY ISLAND (BACKGROUND)



PLADDA LIGHT

extremity. Two church spires, standing in the village at the head of the harbor, are prominent. A conspicuous radio mast stands on a hill 2.7 miles W of the village. Numerous unlit mooring buoys lie in the S part of the harbor and trots of small boat moorings are situated off the village.

Anchorage.—Anchorage can be taken in depths of 27 to 31m, sand and mud, in the NW part of the harbor. Vessels should not anchor in less than 18m, as the depths shoal abruptly. During E or SE gales, better shelter is available off the W side of Holy Island.

Brodick Bay (55°35'N., 5°08'W.) indents the coast between Corriegills Point, 1.5 miles NW of Clauchlands Point, and Merkland Point, 2 miles NNW.

Winds—Weather.—It is reported that heavy squalls can be expected from the valley at the head of the bay during W winds.

Tides—Currents.—Tidal currents in the bay are weak.

Depths—Limitations.—Brodick Pier, T-shaped, is situated on the S side of the bay. Another pier, L-shaped with a ro-ro berth, is situated close E of Brodrick Pier. The ro-ro pier is reported (1994) to be subject to further development.

A railroad car ferry from Fairlie (55°46'N., 4°51'W.) maintains regular service with Brodick.

Aspect.—Corriegills Point is marked by a beacon and a prominent radio mast stands 0.3 mile W of it. A beacon stands 0.2 mile NNE of Merkland Point.

A castle, with a tower and a flagstaff at its SW corner, is conspicuous at the NW side of the bay. A lighted mooring buoy lies in the bay.

Anchorage.—Anchorage, sheltered from W winds, can be taken in depths of 20 to 30m, sand and mud, in the bay.

Caution.—Submarine cables lie across Firth of Clyde, 1.7 miles N of Merkland Point, and can best be seen on the chart.

Sannox River (55°40'N., 5°09'W.) flows into Firth of Clyde 3.5 miles N of Merkland Point. A rock, with a depth of 1.5m, lies 0.2 mile E of the bar at the river mouth.

For Bute Sound, NW of the Sannox River, see Sector-paragraph 1.31.

1.12 Farland Head (55°42'N., 4°54'W.), 4 miles NW of Ardrossan, is steep-to on its W side. The ruins of a castle lie close N of the point. The inner part of Firth of Clyde is entered between Farland Head and **Garroch Head** (55°43'N., 5°02'W.), the steep-to S extremity of Bute Island, 4.5 miles WNW. The entrance is encumbered by Little Cumbrae and Great Cumbrae Islands. The principal navigable part of the firth leading to the River Clyde passes W of these islands. The fairway is deep and free of dangers. Largs Channel passes to the E of the islands.

The flood tidal current setting across the Bute Sound entrance, joining the current setting NW from the E side of the outer Firth of Clyde, passes on both sides of the Cumbrae Islands with a velocity of 1.5 knots at springs. The ebb currents, from Bute Sound and from along the E coast of Bute, meet off Garroch Head forming tide rips which should be avoided. Tidal currents in the firth are both weak and variable.

Little Cumbrae Island (55°44'N., 4°57'W.) lies in the middle of the entrance to the inner part of the Firth of Clyde. Near the center of the island stands the conspicuous ruins of an old tower.

Cumbrae Elbow (55°43'N., 4°58'W.), on which a light is shown from a conspicuous tower, is the W extremity of Little Cumbrae.

Cumbrae Pass (55°44'N., 4°56'W.), lying between Little Cumbrae and Great Cumbrae, has a navigable width of 0.3 mile and a least depth of 25m in the fairway between Sheanawally Point and Portachur Point, 0.5 mile NNW, the SW extremity of Great Cumbrae Island. The flood tidal current sets E and the ebb W through the pass, with a velocity of 1.5 knots at springs. A beacon stands close WNW of Portachur Point, marking the landing point of a submarine power cable which crosses the pass from Little Cumbrae Island.

Great Cumbrae Island (55°46'N., 4°55'W.), rising to a height of 125m near the middle of the island, is steep-to. At Portachur Point, the SW end of the island, a spit extends 0.2 mile SW and is marked by a buoy. Tomont End, the NE extremity of the island, is marked by a monument. A prominent building stands 0.7 mile S of Tomont End. A water sports center, offshore moorings, and mooring buoys lie off the E side of the island between Tomont End and Clashfarland Point, the E extremity, about 1.7 miles S. A small pier, with a depth of 4.9m alongside the head, is situated 1 mile SSW of Clashfarland Point.

Millport Bay (55°45'N., 4°55'W.) (World Port Index No. 33520), indenting the S side of Great Cumbrae, is partly encumbered by low islets and foul ground. A tall spire and tower in the town are conspicuous. A pier at the W side of the bay has a depth of 2.1 alongside. Range lights, in line bearing 333°, lead in a least depth of 2.4m to an anchorage with a depth of 3.7m, about 0.1 mile SSE of the pierhead. Anchorage can also be taken in the E part of the bay in a depth of 11m,



MILLPORT BAY FROM NE

Firth of Clyde—Inner Part—West Side

1.13 Rubh'an Eun lies 1 mile NE of Garroch Head. A light is shown from a prominent tower standing on the point.

Kilchattan Bay (55°45'N., 5°01'W.) indents the SE side of Bute Island 1 mile NNW of Rubha'n Eun. Drying flats fill the head of the bay.

Caution.—Submarine cables lie across the firth close N and 3 miles N of Kilchattan Bay.

Ascog Point (55°50'N., 5°01'W.), 6 miles N of Rubha'n Eun, is marked by a prominent church. An islet lies close off the point. Ascog Patches, marked by a lighted beacon and having a depth of 7m, lie 0.5 mile E of Ascog Point.

Bogany Point (55°51'N., 5°01'W.), the NE end of Bute Island, is marked by a conspicuous pavilion, with a green cupola surmounted by a ball.

Toward Point (55°52'N., 4°59'W.) is low, rocky, fringed by reefs, and fronted by shoals, marked by a buoy, extending 0.5 mile offshore. Toward Bank, with a least depth of 4.3m, lies 1 mile SW of the point and is marked by a lighted buoy; the channel between Toward Point and Toward Bank is foul and not recommended. A light is shown from a conspicuous tower standing on Toward Point and several lattice towers stand within 1.2 miles of it. Castle Toward, 1.2 miles WNW of the light, is conspicuous.

Rothesay Sound is entered between Toward Point and Bogany Point about 2 miles SW; see Sector-paragraph 1.34.

Inellan Beacon (55°53'N., 4°58'W.) marks the E edge of a rocky ledge extending offshore about 1 mile N of Toward Point. A disused pier, in poor condition, is situated about 1 mile N of Inellan Beacon.

Dunoon Point (55°57'N., 4°55'W.), a triangular headland, projects from the coast and rises to Castle Hill, a green, rocky knoll on which stands the ruins of Dunoon Castle. The coast extending S to Inellan is steep-to. The spire and tower of two

churches standing in Dunoon close N of the point are conspicuous. A pier, 150m long, with a depth of 4.3m alongside forms a ro-ro terminal at Dunoon. There is a ferry service to Gourock (55°57'N., 4°48'W.).

The Gantocks, a partly drying reef at the SE end of a shoal extending 0.8 mile from Dunoon Point, is marked by a lighted beacon and a buoy.

Caution.—A submarine cable area lies close S of the Gantocks and is shown on the chart.

A submarine gas pipeline lies across the firth about 1.2 miles S of the Gantocks and may best be seen on the chart.

Dunoon Bank, with a least depth of 21.5m, lies close W of the main ship channel, 0.5 mile ENE of the Gantocks. A lighted buoy marks the SE side of the bank. A wreck, with a least depth of 14m, lies sunk on the bank.

Hunter's Quay (55°58'N., 4°55'W.), 1.5 miles N of Dunoon, lies on the SW side of the entrance to Holy Loch. There is a pier with a ferry and ro-ro facility.

For Holy Loch, see paragraph 1.23.

Firth of Clyde—Inner Part—East Side

1.14 Largs Channel (55°46'N., 4°53'W.) is entered between Farland Head and the SE end of Great Cumbrae Island. The mainland coast on the E side of the channel is fronted by drying sandflats which extend as far as 0.8 mile offshore. The sands, and the edge of shoals along the E side of the channel, are marked by perches and buoys.

Little Brigurd Point (55°43'N., 4°54'W.) lies 1.5 miles N of Farland Head. Hunterston power station, which is conspicuous, stands a short distance inland from the point. A jetty and the water intake for the power station are situated about 0.5 mile S of the point. The outfall pipes from the power station extend seaward on the N side of the point. A buoy is moored 0.4 mile NW of Little Brigurd Point and marks the seaward limit of the outfalls.

Caution.—Vessels are cautioned to pass W of the outfall buoy and keep well clear of the outfall pipes as the discharge of hot water from them causes considerable turbulence.

1.15 Hunterston Ore and Coal Terminal (55°45′N., 4°53′W.) (World Port Index No. 33515), a jetty 445m long, lies nearly 2 miles NNE of Little Brigurd Point, at the head of a causeway. This causeway extends 1 mile SE and E across the reclamation area to the stockyards which supply ore and coal to Ravenscoft Steelworks. There is a least depth of 28.5m alongside. Vessels of up to 350,000 dwt, 443m in length, and 26m draft can be accommodated at the outer berth and vessels of up to 70,000 dwt can be accommodated at the inner berth. Mobile cranes standing on the jetty are conspicuous.

An oil platform construction site is situated in the SW part of the reclamation area, 1 mile SSW of the above-mentioned jetty. A channel, which is buoyed, leads to a jetty on the N side of the site.

Hunterston Channel, the recommended channel serving Hunterston Ore and Coal Terminal, leads through Largs Channel from Skelmorlie Channel, 1.2 miles N of Great Cumbrae Island, and then between Little Cumbrae Island and the mainland.

Fairlie (55°46'N., 4°51'W.), a town stretching along the shore, is fronted by Fairlie Roads and Fairlie Patch; the latter, rocky and almost dry, lies 0.5 mile offshore, about 0.2 mile ENE of Hunterston Jetty and is marked by a lighted buoy. The roads are very constricted. Yacht moorings are laid across the roads and sands fronting the town. A prominent church spire is situated near the N end of the town and a disused pier is situated close NW of it. A mooring buoy is situated 0.2 mile SW of the disused pier.

NATO Terminal Pier (55°46'N., 4°52'W.), close N of Fairlie Pier, is L-shaped and extends 305m offshore and then N for 185m. A depth of 10.4m is maintained alongside the W side of the pier, however, an 8.4m patch lies close WSW of the elbow. A lighted buoy is moored 0.2 mile S of the pier. It was reported (1992) that ground tackle was laid out in the vicinity of the pier.

Largs Yacht Haven (55°46'N., 4°51'W.), protected by breakwaters, is situated 0.3 mile N of the NATO Pier. A conspicuous monument, 12m high, stands at Far Bowen Craigs, close N of the yacht harbor.

1.16 Largs (55°48'N., 4°52'W.) (World Port Index No. 33500), a coastal town, lies 2.2 miles N of Fairlie. There are depths of up to 3.6m alongside a pier which is 67m long. It is used by ro-ro and passenger ferries and coastal vessels. Conspicuous church towers stand close NNE and SE of the pier.

The Knock, a 213m high conical hill topped by a cairn, stands 1.5 miles N of Largs. Knock Castle, 0.5 mile W of The Knock, and a castellated building, often flying a red flag from a flagstaff on a turret of the building, situated 0.5 mile N of Knock castle, are prominent. Skelmorlie Castle stands 1.5 miles N of Knock Castle. A measured distance, marked by beacons and indicated on the chart, lies N of Skelmorlie Castle.

Skelmorlie Bank (55°52'N., 4°55'W.), with a least depth of 5.3m and marked by a lighted buoy, lies between the Firth of Clyde Channel and Skelmorlie Channel, about 1.5 miles WNW of Skelmorlie Castle.

Wemyss Bay (55°53'N., 4°53'W.), a shallow bight, indents the coast close S of Wemyss Point, a blunt promontory, located 2.2 miles N of Skelmorlie Castle. A castle stands on Wemyss Point, however, it was reported (1987) that the castle was obscured. A ferry pier, with a ro-ro facility, is situated in the bay 1 mile S of the castle. The pier, 187m long, has alongside depths of 0.6 to 3.7m.

Inverkip Power Station, with a conspicuous chimney 238m high, is situated between Wemyss Point and Inverkip Bay. A Thead oil jetty, lying 0.4 mile N of Wemyss Point, has a length of 250m and a depth of 20m alongside. Tankers of up to 95,000 dwt can be accommodated.

Kip Marina, entered by a narrow buoyed channel, lies 0.7 mile NE of the power station. Kip lighted buoy, 0.5 mile N of a conspicuous chimney, lies close W of the entrance channel. Vessels of up to 22.8m in length and 2m draft may be accommodated at the marina.

Ardgowan Bank, with a least depth of 12.6m, lies on the E side of the firth 1.2 miles N of Wemyss Point and extends about 0.2 mile W from the shore.

Warden Bank (55°56'N., 4°54'W.), with a least depth of 10.8m, lies close E of the ship channel 1.5 miles NW of Kip Marina and is marked by a lighted buoy.

Cloch Point (55°57'N., 4°53'W.) lies 3 miles NNE of Wemyss Point. A light is shown from a tower on the point. From the point the coast turns abruptly ENE to the entrance of the River Clyde.

River Clyde Approach

1.17 Firth of Clyde Channel, the recommended channel for ships bound through the firth and approaches to the River Clyde, extends from a position 1.2 miles W of Little Cumbrae (S end) to Whiteforeland Point (55°58'N., 4°47'W.). A depth of 18.8m prevails in the channel except abeam Skelmorlie Bank, where there are depths of 17.5m. Lighted buoys mark the midchannel line.

Tides—Currents.—Tidal currents flowing N and S on the flood and ebb, respectively, in the inner Firth of Clyde have a maximum velocity of 1 knot. In the approaches, W of Cloch Point, the flood current divides and runs N to Loch Long and E to the River Clyde. Velocities increase near the shores and salient points. The velocities decrease offshore, where the current becomes rotary. The flood current off Kempock Point runs E to the river, Ardmore Head, and Rosneath Point where part of the current enters Gare Loch.

Regulations.—Vessels navigating within the recommended channels should be considered to be in "narrow channels" within the meaning of Rule 9 of The International Regulations (COLREGS 72). Skelmorlie Channel, recommended for ships with a draft in excess of 15m, is buoyed throughout. Transit is one-way in this channel.

Signals.—Pennant No. 1 of the International Code of Signals is displayed on approaching and passing through Firth of Clyde Channel. Pennant No. 2 is displayed by ships using Skelmorlie Channel. There is no signal for Hunterston Channel.

Anchorage.—No. 1 Anchorage off Kilchattan Bay, Nos. 2 to 6 Anchorages between Great Cumbrae Island and Rothesay Sound, and No. 7 Anchorage in Rothesay Sound are designated for deep-draft ships. All vessels proceeding to an anchorage in the firth should obtain permission through Clydeport Radio.

From abeam Cloch Point, the inner reach trends NE for 2 miles then E for 3 miles to where the River Clyde empties into its SE side. This reach is divided into two parts by the narrows between Whiteforeland Point and Portkil Point (55°59'N., 4°48'W.). The W half of the reach is relatively deep and has no off-lying dangers; the E half is shallow, with a drying flat fronting the head for as much as 0.5 mile.

Rosneath Patch (55°59'N., 4°47'W.), the only danger in the inner reach, lies 0.8 mile N of Whiteforeland Point. The shoal has a least depth of 1m and is marked by a lighted beacon.

The Hole (55°58'N., 4°46'W.), a deep area 0.5 mile in extent lying 1 mile S of Rosneath Point (55°59'N., 4°46'W.), has

depths of 36m to 70m. Range lights, aligned 196°, shown from masts standing 0.5 mile ESE of Whiteforeland Point and Rosneath Patch lighted beacon, bearing 285°, intersect and mark the middle of The Hole.

Anchorage "A" lies S of Rosneath Point and E of Rosneath Patch. It is subdivided for reference purposes. "A3" berth is the explosives anchorage. The usual anchorage is E of the 196° range alignment marking The Hole, with the best holding ground in the N half of the anchorage.

Anchorage "B" is a deep-draft area between Firth of Clyde, Loch Long, Ardmore and Kilcreggan Channels. Very large deep-draft vessels, unable to use "A" and "B", should use designated anchorages in the outer part of Firth of Clyde. Ships intending to use any of these anchorages must first obtain permission through Clydeport Estuary Radio (Greenock).

Caution.—Several spoil ground areas, cable areas, outfall pipelines, and degaussing ranges lie in the inner reach and may best be seen on the chart.

1.18 The N shore of the entrance to the River Clyde is formed by the S end of a peninsula which separates Loch Long from Gareloch.

Barons Point (55°54'N., 4°51'W.) is the SW extremity of the peninsula. A light is shown close offshore of the point. Kilcreggan Bay, 1 mile E of Barons Point, has a ferry pier with yacht moorings lying E of it.

Portkil Point (55°59'N., 4°48'W.), marked by a beacon, is located 1.8 miles ESE of Barons Point. Two conspicuous radio masts, 256m high, stand 0.5 mile NNE of the point.

Rosneath Point (55°59'N., 4°46'W.), 1 mile ENE of Portkil Point, is the SE extremity of the peninsula.

McInroy's Point (55°57'N., 4°51'W.) is located 1 mile NE of Cloch Point. There is a pier with ro-ro facilities. Kempock Point, from which a light is shown, is located 1.5 miles NE of McInroy's Point. West Bay, SW of the point, is fronted by foul ground and has numerous yacht moorings. Darroch Tower stands 0.4 mile SSW of Kempock Point and is conspicuous.

Gourock (55°58'N., 4°48'W.) (World Port Index No. 33380), located in Gourock Bay, is used by ferries, yachts, and pleasure craft. The bay is entered between Kempock Point and Ironotter Point 0.6 mile E. Strong winds from between NW and NE raise a considerable sea in the bay.

A wharf, 490m long, at the W side of the bay, has a ro-ro berth and depths alongside of 3.7 to 6.1m. There is a disused pier at the head of the bay.

Whiteforeland Point (55°58'N., 4°47'W.) is located at the narrows in the approach to the River Clyde 0.2 mile E of Ironotter Point. A prominent building with a framework radio mast, 18m high, and two flagstaffs on its flat roof, with a beacon close W of it, stands on Whiteforeland Point. Craigs Top, which rises to an elevation of 128m, 0.5 mile S of the point, has a flagstaff on the summit and is conspicuous.

River Clyde (Clydeport)

1.19 The River Clyde, of prime commercial importance to Scotland, is over 100 miles in length. From its source, in the mountains, the river flows N and NW to its mouth at the Tail of the Bank, off Greenock. Oceangoing ships can proceed in a

buoyed river channel as far as Glasgow, passing major industrial areas and shipbuilding plants.

Tides—Currents.—Depths in the entrance can be affected by wind and rain. These changes are probably greatest in the upper part of the Firth of Clyde and in the entrance to River Clyde, where winds from the SW will have more effect than winds from the NE.

The tidal current in the river runs in the direction of the channel except at river bends where the current sets toward the outer side. The duration of the ebb current increases as the river is ascended. Tidal currents are weak, but with strong NE winds, heavy rainfall or melting snow, the duration and velocity of the ebb current is increased greatly. Dry weather with SW winds increase the duration and velocity of the flood current. In the River Clyde and other estuaries, HW occurs progressively later upriver, with tide ranges gradually increasing toward the head of the river and lochs.

Clydeport, comprised of the ports of Glasgow, Greenock, and Ardrossan, together with other important facilities such as Hunterston Ore Terminal and Finnart Oil Terminal in Loch Long, is administered by the Clyde Port Authority.

Depths—Limitations.—The dredged river channel is entered close W of the Tail of the Bank about 1 mile ESE of Whiteforeland Point. From the entrance to Newark Castle at the E end of Port Glasgow, a distance of 3.2 miles, the channel is maintained at a depth of 8.1m, with a width of 100m. Between Newark Castle and Glasgow, a distance of 15 miles, the channel is maintained at depths of 6.9 to 8.2m. A depth of 5.3m is maintained to Kingston Bridge.

Aspect.—Greenock Bank (55°57'N., 4°44'W.) extends across the entrance of the River Clyde between Clydeport Container Terminal and Ardmore Head. The bank is shallow, partly drying in places. Tail of the Bank, the NW end of Greenock Bank, extends to the River Clyde entrance channel.

Ardmore Head (55°58'N., 4°42'W.), a low, rocky peninsula at the E side of the River Clyde entrance, is fronted by flats and shoals as far as Greenock Bank. Hill of Ardmore, covered by trees, rises in the middle of the peninsula.

Pilotage.—Pilotage is compulsory, within both the Outer Pilotage Area and the Inner Pilotage Area, for vessels exceeding 80m in length carrying dangerous substances in bulk, all vessels which are not gas-free, and all vessels exceeding 25m in length carrrying more than twelve passengers. Pilotage is also compulsory for all vessels exceeding 25m in length which are carrying more than twelve passengers and are proceeding to Loch Fyne or Kyles of Bute. The pilot boards off Little Cumbrae Island.

In the Outer Pilotage Area, pilotage is also compulsory for all vessels exceeding 120m in length transiting the area and for vessels exceeding 80m in length proceeding to Hunterston, Loch Striven, Inverk'ip, or other berths or anchorages within the Outer Pilotage Area as well as for vessels exceeding 100m in length bound for Ardrosssan. The pilot boards off Little Cumbrae Island.

In the Inner Pilotage Area, pilotage is also compulsory for all vessels exceeding 70m in length not proceeding E of Lighted Buoy No. 1; all vessels exceeding 60m in length proceeding E of Lighted Buoy No. 1; and all vessels under tow, dumb barges, etc., exceeding 35m in length when proceeding E of the buoy. The pilot boards 0.4 mile NW of Kempoch Point.

Vessels should send their ETA to the appropriate pilot station at least 6 hours in advance.

Regulations.—The dredged river channel is subject to the regulations of the recommended channels. Regulations and signals of the port authority are applicable to ships navigating the River Clyde, Firth of Clyde and Kilbrannan Sound, within an area bound by a line extending due E from Corriegills Point (55°34'N., 5°07'W.) and a line drawn due W from Loch Ranza (55°43'N., 5°18'W.). The regulations also contain special light and sound signals.

Health regulations require transmittal of a Bill of Health aboard ship to be sent to "Porthealth, Glasgow" not more than 24 hours and not less than 12 hours before arrival at Tail of the Bank, where pratique is granted.

The Clyde Port Authority's Estuary Control Tower at Greenock (55°57'N., 4°46'W.) maintains a Port Operations and Information Service. The Clydeport Estuary Radio can be contacted 24 hours on VHF channel 16 or 12. The seaward limits of the control area comprise a line in the Firth of Clyde extending due E from Corriegills Point and a line in Kilbrannan Sound extending due W from Loch Ranza entrance. Inbound vessels should send their ETA at the limit of the area at least 24 hours in advance, or if closer, within 1 hour of departure from the previous port. On or before entering the area, vessels should report the following:

- 1. Vessel's name and nationality.
- 2. Intended approach channel.
- Destination.
- 4. Draft.
- 5. Where the pilot is to be embarked.
- 6. Whether an anchorage is required.
- 7. ETA at Cloch Point (55°56.6'N., 4°52.5'W.).
- 8. Inability to proceed or maneuver normally.
- 9. Details of any damage the vessel has sustained. Vessels should subsequently report when fast alongside a berth.

Outbound vessels or vessels shifting berth should send their expected time of commencing movement at least 24 hours in advance. At least 1 hour before sailing vessels should report by VHF or by telephone the following:

- 1. Vessel's name and nationality.
- 2. Location (berth).
- 3. ETD.
- 4. Destination.
- 5. Draft.
- 6. Where the pilot is to be disembarked.
- 7. Whether an anchorage is required.
- 8. Vessels shifting: designation of new berth.

Immediately before sailing, vessels should obtain clearance to proceed.

In addition to inbound and outbound reporting requirements, vessels without a pilot should also report when W of Little Cumbrae Island and when passing Lighted Buoy No. 1. Information on weather and shipping movements is available on request. The details of any accident or incident concerning

the safe navigation of a vessel, or the safety of a vessel berthed in port, should be reported immediately.

Greenock (55°57'N., 4°45'W.)

World Port Index No. 33390

1.20 Greenock (55°57'N., 4°45'W.), located close E of Gourock, slopes steeply from the River Clyde as it stretches along the S bank of the river merging SE with Port Glasgow.

Tides—Currents.—Tides rise 3.1m at springs and 1.8m at neaps.

Depths—Limitations.—Clydeport Container Terminal, at the entrance of the Clyde, has a container wharf 366m long with a depth alongside of 12.6m at LWS. Although this wharf is primarily a container berth, sugar and forest products are also handled. West Quay and Custom House Quay, each in ruins, lie approximately 0.5 mile E of the container terminal. Wharfs, quays, tidal harbors and basins, extending for 2 miles upstream to Maurice Clark Point, form the harbor.

A sea wall extends from the Container Terminal to East India Harbor. Bollards are set at frequent intervals along the wall.

Garvel Basin has a depth of 6.1m in the entrance and depths of 4.9m and 6.1m inside on the N and S sides of the basin, respectively.

James Watt Dock, a wet dock which handles sugar and molasses, is entered from Garvel Basin. There are depths of 6.4m over the sill and 5.8m in this dock. When closed, vessels lie afloat in depths of 8.7 to 9.9m. Vessels carrying sugar and being up to 170m in length, and vessels carrying molasses and being up to 150m in length, with a beam of 21.5m and 8.4m draft have been accommodated.

Great Harbor, entered E of Maurice Clark Point, has a depth of 8m in the entrance and SE part. A depth of 7.1m is maintained at the W end of the Repair Quay. The principal berth is Molasses Jetty which extends SW from the SE end of Garvel Embankment, which forms the NE side of the harbor. This jetty, which handles bulk molasses, has a length of 90m and a dredged depth alongside (1998) of 8.5m.

There is a drydock 305m long and 44.2m wide with a depth of 11.3m over the sill. Restrictions as to size of ship and drafts allowed are defined by the Clyde Port Authority.

At Victoria Harbor there is 700m of quayage for small craft a depth of 3.9m alongside.

Aspect.—Conspicuous landmarks in Greenock include a church spire, the spire on the Town Hall, and the cranes at the Container Terminal.

Pilotage.—Pilotage is compulsory. Greenock lies within the Inner Pilotage Area of the River Clyde.

Anchorage.—See River Clyde Approach.

1.21 Port Glasgow (55°56′N., 4°41′W.), located on the S shore of the Clyde, was formerly the seaport for Glasgow, but navigational improvements to the Clyde have resulted in greatly decreasing its significance as a port. Shipbuilding, foundries, and the export of timber are important to the port. There is a quay which can accommodate vessels up to 4,000 dwt and 90m in length.

Dumbarton (55°57'N., 4°34'W.) is located on the River Leven, above its junction with the River Clyde. Dumbarton

Castle, prominent and double-peaked, is so steep-to that it can only be reached by steps on its S side. A narrow channel with a depth of 2.4m leads to a shallow tidal basin lying close N of the castle.

Bowling (55°56'N., 4°29'W.) (World Port Index No. 33450), a ship repair center with lay-up berths, is formed by two parallel piers fronting the river. There is a least depth of 4.6m alongside the quay.

Dunglass Terminal (55°56'N., 4°31'W.), two offshore tanker berths at Bowling, lie about 1 mile downriver from the Bowling Harbor entrance. Tankers of up to 20,000 tons and 168m in length with a maximum draft of 9m can be accommodated.

Old Kilpatrick (55°55'N., 4°27'W.) (World Port Index No. 33460), a town on the N side of the River Clyde and 1 mile upstream of Bowling, has an oil tanker wharf, 135m long with depths of 7.6 to 8.7m alongside, situated 0.5 mile above Erskine Bridge. A tanker must hoist the International Code answering pennant by day, or two lights, red above white, at night when docking and undocking.

Erskine Bridge lies approximately 0.2 mile above Old Kilpatrick. The vertical clearance is 55m, unless the painting gantry is in place, where the clearance decreases to 52m. The navigable channel under the bridge is 115m wide. An overhead power cable exists 0.7 mile farther downstream, with a safe clearance of 74m.

Rothesay Dock (55°54'N., 4°24'W.) (World Port Index No. 33470), a large tidal basin, is situated on the N side of the Clyde, opposite the River Cart. Rothesay Dock handles bulk cargo and scrap metal. The entrance, 60m wide, leads to a total quayage of 1,320m with a depth of 6.7m alongside. There is also a riverside quay, 180m long, with a depth of 6.2m alongside.

Traffic signals are hoisted at the basin entrance. International Code flag "B" by day, and a red light above the masthead light, at night, aboard ship signifies docking, or underway in the river after undocking. A green or red light shown from the signal mast at the basin entrance, signifies when the entrance is clear or closed, respectively.

Renfrew (55°53'N., 4°23'W.) (World Port Index No. 33480), a small tidal basin on the S side of the Clyde, has quays with depths of 3 to 4m alongside. Vessels of up to 1,450 dwt and 65m in length can be handled.

Glasgow (55°52'N., 4°17'W.)

World Port Index No. 33490

1.22 Glasgow (55°52'N., 4°17'W.), both a port and city, is situated on both sides of the River Clyde, 20 miles above its mouth. The city, an industrial and manufacturing center, has a port renowned for its shipbuilding. The main approach to the port is through the Firth of Clyde.

Tides—Currents.—Description is given with the River Clyde, and additionally on charts of the area. Tides at Glasgow rise 4.1m at springs and 2.4m at neaps.

Depths—Limitations.—Dredged depths in the river channel to Glasgow are shown on the applicable charts. The river channel is dredged to a depth of 6.9m up to 1.6 miles below Kingston Bridge; depths of 5.3m exist from that point to

the bridge. The bridge has a vertical clearance of 19m over a width of 50m. There are no commercial berths above the bridge.

A pedestrian bridge crosses the river about 0.5 mile below Kingston Bridge; part of the bridge can be swung open given 24 hours notice.

King George V Dock, a tidal basin on the S side of the river, has a total quayage of 1,586m with general depths of 7.3 to 8.5m alongside. The dock handles ro-ro, timber, steel, minerals and general cargo.

Shieldhall Riverside Quay, adjacent to King George V Dock on the S bank, has a length of 528m and alongside depth of 7.4m. Shieldhall Riverside Quay handles general cargo.

Meadowside Quay, on the N bank, 1.2 miles upriver from King George V Dock, has a length of 696m and depths of 7.4 to 7.8m alongside.

Stobcross Quay, on the N side of the river, is fitted with a heavy lift crane, has a length of 190m, and a depth of 6.6m alongside.

Vessels with maximum drafts of 9.7m can be accommodated at the port.

There are three drydocks at Govan (55°52'N., 4°18'W.), the largest of which is 268m in length, 25m wide, and 8m deep.

The largest of the three drydocks at Scotstoun (55°53'N., 4°22'W.) is 207m in length, 33m wide, and 7.4m deep.

Signals.—Consult Clyde Port Authority regulations publication. Vessels in transit of the River Clyde should hoist International Code pennant No. 3. Traffic signals are hoisted at signal stations situated at the entrances of most basins.

Anchorage.—See anchorages described with the Firth of Clyde and River Clyde Approach.

Holy Loch

1.23 Holy Loch (55°59'N., 4°54'W.) is entered between Hunter's Quay, previously described, and Strone Point, a rounded promontory 0.8 mile NNE. A spit extends 0.2 mile S of Strone Point and is marked by a lighted buoy.

Aspect.—A church with a conspicuous spire stands on Strone Point. There are depths of over 20m in the fairway throughout the loch as far as its drying head and fringing coastal shoals. The main part of the loch is free of detached dangers. Several settlements on the shores of the loch are served by piers or jetties. Graham's Point, on which a monument stands, is located 1 mile WNW of Strone Point. White Farlane Point, on which there is also a monument, lies on the S side of the loch, 1 mile NW of Hunter's Ouay.

Directions.—Vessels bound for Holy Loch should follow Firth of Clyde Channel and Loch Long Channel, which branches N of Cloch Point (55°57'N., 4°53'W.). From a position about 1.5 miles N of Cloch Point, a course can be shaped to enter the loch.

Caution.—Numerous seabed obstructions exist within Holy Loch; anchorage should not be attempted within the loch.

Loch Long and Loch Goil

1.24 Loch Long and Loch Goil form part of the Clyde Dockyard Port, wherein special regulations and signals are in force to safeguard the movement of naval ships. Entry into the

protected area by unauthorized vessels is prohibited. Entry into the restricted area is prohibited during the movement of nuclear powered submarines or large naval vessels; vessels within the area must clear it.

Loch Long (55°59'N., 4°52'W.), entered between Strone Point and Baron's Point, 1.5 miles E, trends N and NNE for 15 miles to its drying head. The entrance to Loch Goil lies on the W side, 6.5 miles above the entrance. Hills backing the shores on both sides of lower Loch Long become precipitous mountains as the head of the loch is approached.

Winds—Weather.—Deep valleys lie between the mountain ranges. This aspect of the loch causes sudden calms and violent squalls with rapid shifting of the wind and possible danger to small craft.

Tides—Currents.—Tides at Coulport rise 3.4m at springs and 2.9m at neaps.

Tidal currents are weak in the loch. A maximum velocity of 0.8 knot at springs is attained in the entrance. In the inner part of the loch the velocity and turning times of currents are greatly influenced by the wind.

Anchorage.—Anchorage can be taken close offshore on either side of the loch for about 4 miles above the entrance; beyond this distance the shores are too steep-to. Good anchorage can be taken in depths of 14 to 20m, mud, about 0.5 mile from the head of the loch.

Disused cables and swamped moorings exist in Upper Loch Long, between the parallels of 56°07'N. and 56°12'N.

Signals.—Vessels passing through Loch Long Channel and Kilcreggan Channel must display the International Code Nos. 5 and 7 pennants, respectively.

Directions.—Loch Long Channel leading into the entrance has a least depth of 34.7m and is clear of dangers.

Kilcreggan Channel is an inshore channel which leads from Ardmore Channel to Loch Long. By avoiding an 18m shoal on the N side of the channel, S of Kilcreggan Bay, a least depth of 21.9m exists in the channel.

Caution.—Caution should be exercised in transit of Loch Long and Loch Goil as submarines frequently surface and dive in these lochs.

Several mooring buoys are situated throughout the loch.

Submarine cables lie in the entrance to the loch.

A power cable with an overhead clearance of 76m spans the loch 2 miles N of Coulport Jetty.

1.25 Gairletter Point (56°01'N., 4°54'W.), on which there is a conspicuous boathouse, is located 2.5 miles N of Strone Point. A light structure stands on Ravenrock Point 1 mile N of Gairletter Point and a conspicuous hotel stands on a point 0.5 mile N of it.

Coulport Jetty (56°03'N., 4°53'W.), 245m long, with a maintained alongside depth of 10.7m, lies parallel with the E shore of the loch 4 miles N of Baron's Point. A pier extends 45m offshore from close S of Coulport Jetty.

Coulport Covered Berth, 200m long, lies parallel to the shore, 0.7 mile NNE of Coulport Jetty. A conspicuous warehouse-type building covers the berth.

Coulport Works Jetty, 57m long, is situated on the E side of the loch 0.9 mile ENE of Coulport Jetty; it is used for the discharge of construction material. Vessels wishing to berth at this jetty must first obtain clearance from the harbormaster at Faslane. The shore adjacent to the jetties is built up and there are several conspicuous watch towers. A prominent building stands 0.5 mile S of Coulport Jetty.

Caution.—A restricted area and a protected area lie in the vicinity of the jetties and may best be seen on the chart. Fishing is prohibited in the N part of the restricted area.

When the Coulport Restricted Area is closed, the following signals will be displayed from Coulport Jetty and any patrol craft:

- 1. By day—Three green lights disposed vertically and the International Code Pennant superior to Pennant 9.
- 2. By night—Three green lights disposed vertically. Vessel speed is limited to 12 knots in the loch and 7 knots in the restricted area.

1.26 Finnart Oil Terminal (56°07'N., 4°50'W.) (World Port Index No. 33405), 3.5 miles NNE of Coulport Jetty, has two deepwater piers with connections to a tank farm. The port is owned and operated by British Petroleum Oil Ltd.

Tides—Currents.—Tides rise about 3.4m at springs and 2.9m at neaps.

Depths—Limitations.—No. 2 pier is 101m long with a depth of 17.7m alongside and can accommodate tankers of up to 100,000 dwt.

No. 3 pier is 136m long with a depth of 25.3m alongside and can accommodate tankers of up to 330,000 dwt with a draft of 24m. Larger, partly laden vessels with the equivalent displacement may berth. Tankers of up to 409,000 dwt have been handl

Aspect.—Arddarroch House, a conspicuous dwelling, stands in the woods close E of No. 3 pier. Lights, in range 031°, are shown from Cnap Point on the W side of the loch 0.5 mile N of the terminal. Lights are shown from the ends of each pierhead. In each case, the light at the NE end of the pier forms a range alignment with a light ashore, assisting tankers docking at night.

Directions.—At night, vessels should navigate with the white sector of Ravenrock Point Direction Light bearing astern between 203°30' and 204°30'. This will lead vessels to the 031° lighted range. This range should be steered on until the individual pier head ranges are in line. The terminal maintains a port radio station.

Glenmallan Jetty (56°08'N., 4°49'W.), an L-shaped pier, which serves an ammunition depot, is situated on the E side of the loch about 1 mile NE of Finnart Oil Terminal. The pier is 150m long with depths of 11.2 to 11.6m alongside. A restricted area surrounds the pier and is shown on the chart. Anchoring and fishing are prohibited within the area. An area, within which unauthorized entry is prohibited, lies in the vicinity of the pier. Vessels should give a wide berth to ammunition ships being berthed or departing from the pier.

Ardgartan Point (56°11'N., 4°47'W.) is a low point at the mouth of a river 4 miles NNE of Cnap Point. The shore between the points is steep-to.

Arrochar, a village at the head of the loch, has a conspicuous hotel. A T-head wooden pier, situated in front of the hotel, has a depth of 2.7m alongside. A jetty and a disused pier are situated on the W side of the loch between Ardgartan Point and the head of the loch.

1.27 Loch Goil (56°08'N., 4°54'W.), leading off the W side of Loch Long, is entered S of Meall Darraich (56°06'N., 4°52'W.), a bold, precipitous promontory rising at S end of a broad peninsula separating the lochs. The deep valleys between mountain ranges encircling Loch Goil cause variable winds and violent squalls. The E side of the loch is steep-to except for shoals about 0.5 mile within the entrance. Shoals fringe the W side of the loch. Carrick is a small village on the W side of the loch, 1.2 miles within the entrance. The ruins of a conspicuous castle lie on a point fronting the village.

Depths—Limitations.—The Perch, a reef with depths of less than 1.8m marked by a beacon, extends off the W shore of the loch 0.4 mile N of Carrick. A combination range and sector light leads through the entrance of Loch Goil in a least depth of 13m. This leading line passes close SW of an 11.4m shoal lying 0.3 mile WNW of Carraig na Maraig.

Regulations.—An Admiralty Trials Range is operated within the loch. Special signals and regulations are in force. A large, red flag displayed by naval craft at the loch entrance signifies the loch is closed to navigation.

Experimental areas, shown on the chart, lie 0.9 mile and 1.7 miles from the head of the loch. Within these areas there are rafts and unlit mooring buoys. When the areas are in use by nuclear submarines they will be patrolled by safety craft.

Civil craft must stay clear of Douglas Pier (56°09'N., 4°54'W.) as well as naval craft, buoys, rafts, moorings, and other obstructions.

Anchorage.—Anchorage can be taken 0.3 mile from the head of the loch in a depth of 42m.

Anchorage, good holding ground, can be taken in a depth of 18m, sand and mud, about 0.2 mile NE of Carrick (56°06'N., 4°54'W.). Anchorage can also be taken 0.3 mile N of The Perch in a depth of 18m.

Gareloch

1.28 Gareloch is approached between Rosneath Point (55°59'N., 4°46'W.) and Craigendoran Pier, about 1.7 miles E.

The E shore entering the loch, which is low and fronted by a drying mud flat, extends NW for 3 miles forming a bight as far as Rhu Point.

A sea wall fronts the outer 2 miles of this coast. The W shore of the approach to Gareloch is low and wooded to the water's edge. Shoals of less than 5.5m lie up to 0.7 mile off the E shore and 0.2 mile off the W shore.

Gareloch is approached from W through Ardmore Channel (55°59'N., 4°47'W.), then N and NW along a restricted channel through Rhu Narrows (56°01'N., 4°48'W.), which has a least width of 225m. The centerline of this channel is indicated by range lights.

The controlling depth in the approach and entry to the Gareloch is 13.4m. The channel through Rhu Narrows is also maintained at a depth of 13.4m.

Rosneath Farm, a castellated building, conspicuous on most bearings when approaching Gareloch, stands 0.5 mile NW of Rosneath Point.

Helensburgh, a coastal town, stretches along the coast between Craigendoran Pier and **Cairndhu Point** (56°00'N., 4°46'W.). Helensburgh Pier, 245m long, has a depth of 2.1m

alongside. A church steeple and clock tower, which are conspicuous, stand NNE of the pierhead.

Ardencaple Castle stands close ENE of Cairndhu Point and is conspicuous. A jetty, used by landing craft, is situated about 0.4 mile NW of Cairndhu Point. A marina is situated close WNW of the jetty.

Castle Point (56°00'N., 4°46'W.), on the W shore opposite Cairndhu Point, is low and grassy. From Castle Point, the coast recedes to form Rosneath Bay with wooded shores backed by sloping fields. A light is shown from Castle Point. Rosneath Jetty, with a T-head 90m long and a depth of 6.7m alongside, is situated near some conspicuous boat sheds about 0.5 mile WNW of Castle Point.

Signals.—Vessels using Ardmore Channel should display International Code No. 4 Pennant.

Directions.—Ardmore Channel, the recommended channel leading to Gareloch, branches ENE from Firth of Clyde Channel about 0.8 mile NW of Kempock Point. On departing Ardmore Channel E of Rosneath Point, a light on Ardencaple Castle and a lighted beacon, standing 0.5 mile S of the castle, aligned 356°, lead through the first reach; a directional sector light is situated at the lighted beacon. The second reach is entered when the directional sector light near Rhu Point (56°01'N., 4°47'W.) bears 318°. Steer on this bearing until the directional sector lighted beacon, close S of Limekiln Point, bears 295°. Enter the third reach and steer on this bearing until the directional sector light close SW of Castle Point, bears 149° astern, then steer a course of 329° through the narrows.

Rhu Narrows (56°01'N., 4°47'W.), the entrance to the loch, lies between Rhu Point and Limekiln Point, 0.3 mile SW. A drying spit extends from Rhu Point to the edge of the fairway channel which is about 200m wide and has a maintained depth of 13.4m. Vessels should use caution due to marine works in the vicinity of the loch and narrows.

Tidal currents approaching the entrance are variable as to direction and velocity. There is a strong set across the shoals in the vicinity of Rosneath Point. At times, the current in and around the narrows is rotary and strong. Vessels passing through Rhu Narrows on an ebb tide should guard against being set on the shoals off Limekiln Point. Within Gareloch the tidal currents are weak and ineffective.

1.29 Gareloch, with steep-to and wooded E and W shores, leads NNW for 4.2 miles to the drying flat at the head of the loch. Shoals of less than 5.5m fringe both sides of the loch. There are general depths of 27 to 37m throughout the loch. Mambeg Light is shown from the W shore of the loch I mile S of the head. After clearing the narrows, vessels should steer in the directional white sector of the light.

Faslane Bay (56°04'N., 4°49'W.) indents the E coast of the loch between Rowmore Point, 0.8 mile S of the head, and Carnban Point, 1 mile S. Most of the bay is fronted by the Naval Jetty which has depths of 11 to 12.5m alongside. Nos. 1 and 2 berths at the S end of the jetty can be used by vessels up to 10.6m draft. A wharf, used by a ship-breaking firm, is situated N of the Naval Jetty and has a dredged depth of 9m alongside the S 200m; the remainder of the wharf has a depth of 8.4m alongside. Two oil piers, situated 0.2 mile N of

Rowmore Point, have depths of 11.3m and 10.9m alongside the S and N piers, respectively. Tankers of up to 32,000 dwt can be accommodated.

Tides—Currents.—Tides at Faslane rise 3.4m at springs and 2.9m at neaps.

Regulations.—A protected area has been established adjacent to the naval installations at Faslane and is shown on the chart. Entry into the restricted area by unauthorized vessels is prohibited. A protected channel has been established in the approaches to, and through, Rhu Narrows and a restricted area has been established off the naval installations at Faslane; limits of the areas are shown on the chart. Entry into the protected channel and restricted area is prohibited during the movement of nuclear powered submarines and large naval ships; vessels within these areas must clear them when the relevant signals are displayed.

When the Rhu Narrows Protected Channel and Faslane Restricted Area are closed, the following signals will be displayed:

- 1. Rhu Narrows
- a. By day—a red rectangular flag with a white diagonal bar and a red light over two green lights disposed vertically
- b. By night—a red light over two green lights disposed vertically.
- 2. Faslane
- a. By day—the International Code Pennant superior to No. 9 Pennant and three green lights disposed vertically.
 - b. By night—three green lights disposed vertically.

The loch is a Clyde Dockyard Port, thereby speed is limited to 12 knots in the loch and 7 knots in the protected and restricted areas.

Anchorage.—Rosneath Bay affords anchorage, sheltered from S winds, to small vessels with local knowledge. There is general anchorage between Cairndhu and Rhu Points. Temporary anchorage can be taken in suitable depths throughout Gareloch, clear of restricted areas, but the holding ground is not good.

Approaches to Kilbrannan Sound

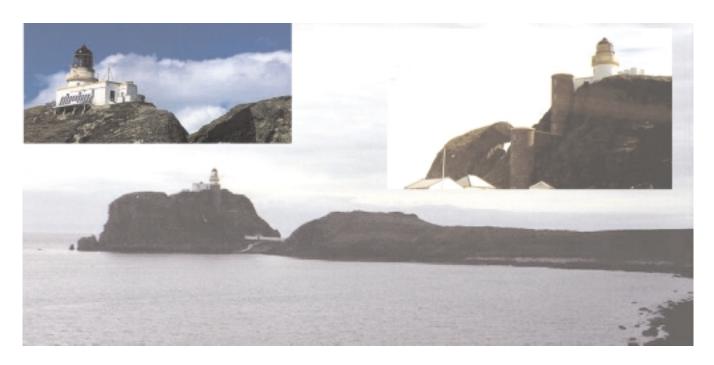
1.30 Kintyre (55°30'N., 5°35'W.), a broad mountainous peninsula, forms the W side of the sound and the approaches. It is connected to the mainland NNE by a narrow isthmus.

Sron Uamha (55°17'N., 5°46'W.), the S extremity of Kintyre, lies 1.5 miles SE of Mull of Kintyre and is a rocky, conspicuous promontory. Tide rips occur off the point.

Carskey Bay, an open bight, indents the coast between Sron Uamha and Rubha McShannuich, 5 miles E. A conspicuous white hotel stands at the head of the bay and a framework radio mast stands on Rubha McShannuich. Small vessels with local knowledge can obtain anchorage in the bay in depths of 7 to 9m.

Macosh Rocks, which dry and are marked by a lighted buoy, form the W part of the reef extending 0.2 mile offshore from Rubha McShannuich. Barley Ridges are a series of rocky reefs extending about 1.5 miles NE of Macosh Rocks.

Sanda Island (55°17′N., 5°35′W.) is the largest of a group of islets and rocks lying off Rubha McShannuich. Reefs and rocks lie within 1 mile N and E of the island. The Ship, a small



THE SHIP LIGHT

promontory midway along the S side of the island, appears detached when seen from W. A light is shown from a tower standing on the S extremity of The Ship and is equipped with a racon.



SANDA ISLAND FROM WESTWARD

Sanda Sound (55°18'N., 5°35'W.) is the navigable passage between the island group and the coast NW. The sound has a width of about 1 mile and depths of 9 to 51m. The least charted depth in the fairway of Sanda Sound is 19.4m lying 0.8 mile NW of Sanda Island. Tidal currents attain a velocity of 5 knots in both E and W directions.

Du-na-h-Oighe is a small isolated mound located 2.2 miles NE of Rubha McShannuich. A granite cross stands on a point close SW of the mound. Arranman's Barrels, marked by a lighted buoy, are several large drying stones which lie on a ledge extending 0.3 mile E of Du-na-h-Oighe.

Ru Stafnish (55°22'N., 5°31'W.), the SE point of Kintyre, is located 3.2 miles NE of Du-na-h-Oighe. Prominent radio masts stand close W of the point.

Davaar Island (55°25'N., 5°33'W.) lies at the W entrance of Kilbrannan Sound, 3.5 miles NNW of Ru Stafnish. It attains an elevation of 114m on the S side and a light is shown from the N side.

Cleiteadh Mor (55°26'N., 5°15'W.), the SW extremity of Arran, is located 4.5 miles W of Kildonan Point. The coast between is fronted by rocky spurs which extend up to 0.2 mile offshore.

Kilbrannan Sound, Bute Sound and Lochs

1.31 Kilbrannan Sound (55°30'N., 5°26'W.), lying W of the Island of Arran and E of Kintyre, extends N from its entrance to a junction with Inchmarnoch Water and the Bute Sound. Shores on both sides of the sound are irregular, hilly, and fringed by rocky shoals. The sounds and adjacent lochs are all navigable by ocean-going ships of deep draft. The hilly coasts are partly steep-to and backed by mountains and steep ravines. There are very few anchorages.

The sound is entered between Cleiteadh Mor, the SW point of Arran, and Davaar Island, about 10 miles W. Depths are irregular throughout the sound with 20 to 26m existing in the entrance. There are few detached dangers, and those lying close offshore are marked by buoys.

Tides—Currents.—In mid-channel the current is generally rotary, and lacks strength. There is a counterclockwise and rotary current in constricted channels. Along the S coast of Arran Island there is a continuous E current. Off salient points and around Davaar Island, velocities may reach 4 knots during springs, whereas along the shores, currents are weak. At Skipness Point (55°46'N., 5°20'W.), the tidal currents run strongly in both directions. Tide rips occur over the banks and off salient points with an ebb or S current.

Caution.—Submarines exercise frequently in the entrance to and within the sounds.



LOCH RANZA FROM S

The E coast of Kilbrannan Sound for about 8 miles N of Cleiteadh Mor is fronted by shoals and foul ground as far as 0.5 mile offshore.

Iron Rock Ledges (55°27'N., 5°20'W.), partly drying, extend 0.8 mile offshore and are marked by a lighted buoy.

Drumadoon Point (55°30'N., 5°21'W.) is a low, rocky spur forming the NW extremity of a shoal bay. King's Caves are located in conspicuous sandstone cliffs extending 1.5 miles N of the point.

Imachar Point (55°37'N., 5°24'W.) is a blunt point 6.5 miles N of Drumadoon Point. The intervening coast is indented to form Machrie Bay. Small vessels can anchor in suitable depths close offshore in the bay and clear of Iorsa Patch, a drying shoal, lying at the N end. A conspicuous radio mast stands on the hillside about 0.8 mile NE of Imachar Point.

Whitefarland Bank (55°37'N., 5°25'W.), with a least depth of 16.8m, has tide rips breaking on it with a S tidal current. Anchorage can be taken in depths of 16 to 18.3m in the bay 1 mile NE of the bank, sheltered from S winds.

Erins Bank (55°37'N., 5°25'W.), contiguous with Whitefarland Bank, has a least depth of 10.1m with heavy tide rips breaking on it during the S tidal current.

Catacol Bay (55°42'N., 5°20'W.), 5 miles NE of Erins Bank, affords anchorage in depths of 15 to 18m, sheltered from S winds.

Caution.—Submarine cables cross the sound in the vicinity of Drumadoon Point and about 1 mile S of Imachar Point and are shown on the chart.

Loch Ranza (55°43'N., 5°18'W.) (World Port Index No. 33320), 6.8 miles NE of Imachar Point, is a constricted, shoal inlet with a drying head frequented by fishing vessels. Rocky shoals and a ledge extending off the NE entrance point narrow



LOCH RANZA FROM N

the entrance fairway. A pier, with a depth of 3.9m alongside, extends N from the S entrance point and a ferry ramp is situated close E of the root. A mooring buoy lies in the middle of the entrance and is used as an off-service ferry berth. Yacht moorings are also situated in the loch. Local knowledge is necessary. Anchorage can be taken in depths of 5 to 10m in the middle of the loch, abeam a castle in ruins. North and S gales make the anchorage untenable.

Cock of Arran (55°43'N., 5°15'W.), 1.5 miles ENE of the entrance of Loch Ranza, is the NE entrance point of the sound. It comprises cliffs of red sandstone.

1.32 Davaar Island (55°25'N., 5°33'W.) lies at the W side of the entrance of Kilbrannan Sound and in the entrance of Campbeltown Loch. The S side of the island is high and

conspicuous; the N and E sides are rocky and somewhat steepto. Reef flats fringe the island. Tidal currents run strongly E of the island, with a velocity reaching 4 knots at springs. Heavy tide rips occur off the SE side of Davaar when the wind opposes the ebb tidal current.

The Doirlinn, a drying sandbank, which is liable to change, extends from Davaar Island to Ottercharach Point, located on the mainland 0.2 mile SW. The N and W sides of the bank are fringed by a gravel ridge, impassable at HW. Millmore beacon stands near the NW end of The Doirlinn.

Kildalloig Bay (55°25'N., 5°33'W.), an open area lying E of The Doirlinn, affords anchorage protected from NW storms in a depth of 9m with the E end of Davaar and Millmore beacon bearing 014° and 301°, respectively.

Campbeltown Loch (55°25′N., 5°36′W.) provides passage through the North Channel, between Scotland and Ireland. The loch is entered between the NW side of Davaar Island and Macringan's Point, 0.5 mile NNW. The shores of the loch are fronted by shoals which narrow the fairway leading to the inner part of the loch to a width of about 150m and to a depth of 13.7m in the area N of Millmore beacon. Lighted buoys mark the sides of the channel where it is restricted. Methe Bank, with a least depth of 10m and marked by a lighted buoy, lies about 0.2 mile W of Millmore beacon.

Trench Point, a projection midway along the N side of the loch about 1.2 miles SW of Macringan's Point, is marked by a disused jetty with a lighted buoy moored off its head and a beacon standing close E.

Campbeltown NATO Pier is an L-shaped concrete jetty on steel piles extending into the SE part of the loch. Three dolphins are situated on each side of the jetty head which is 78m long with a dredged depth of 11.8m alongside.

A small shipyard is situated on the W side of Trench Point, 0.6 mile NW of NATO Pier.

Caution.—A large mooring buoy is moored in the loch about 0.3 mile SSW of Trench Point and a submarine cable extends WSW from the buoy to the shore.

Along the S side of the loch the terrain rises to a height of 350m. Heavy gusts of wind occasionally blow down from the hills.

1.33 Campbeltown Harbor (55°26'N., 5°36'W.) (World Port Index No. 33300), fronting the town at the head of the loch, is a fishing center. Two quays form a tidal basin.

Depths—Limitations.—At the outer side of the Old Quay there is a berth, 110m long, with depths of 4.3 to 4.4m alongside; at the inner side there is a berth 80m long with a depth of 2.1m alongside.

At the outer end of the New Quay there is a berth 79m long with a depth of 4m alongside; at the inner end there is a berth 65m long with depths of 0.1 to 4m alongside.

A jetty close W of the Old Quay has a depth of 3m alongside. The area between the head of Old Quay and the head of New Quay, including part of the inner side of each quay, has been dredged to a depth of 4m. There is a ramp for ro-ro ferries.

Vessels of up to 100m in length and 5m draft can be accommodated at the port.

Aspect.—Range lights, shown from structures standing at the SW side of the loch, lead through the entrance fairway. The

daymarks of the leading light structures were reported (1991) difficult to distinguish. Prominent aids include radio masts standing 0.5 mile N and 0.8 mile NE of Trench Point, a flagstaff standing near the shore 0.5 mile NW of Trench Point, and a monument, with a white cross on its seaward side, standing close NW of the harbor. A church tower with corner pinnacles stands close W of the harbor and another church tower with four pinnacles stands close S of the harbor. The chimney of a school stands 0.4 mile S of the harbor.

A television mast, 51m in height, stands 1 mile SW of the harbor and a white cross war memorial stands close S of the front range structure. When a vessel passes N of Millmore beacon in the entrance, an alternative transit may be used with the prominent chimney at the school and the prominent television mast in line, bearing 251°15'.

Pilotage.—Pilotage is not compulsory, but is available on request with 24 hours advance notice. The harbor can be contacted by VHF channels 16, 13, and 12.

Anchorage.—Anchorage may be taken in the loch. There is good holding ground S and E of Trench Point.

The loch affords sheltered anchorage for vessels navigating North Channel.

Caution.—Silting in the harbor was reported in 1990.

1.34 The coast N of Macringan's Point is fronted by rocky shoals and foul ground which extend about 0.5 mile offshore. Otterard Rock, with a least depth of 3.8m, lies 1.5 miles NE of Macringan's Point and is marked by a lighted buoy close E. Vessels approaching Campbeltown from N can clear the rock by keeping Macringan's Point aligned with the beacon on Trench Flat, bearing 237°.

Kildonald Point, a well-defined promontory, is located 3.5 miles NNE of Macringan's Point. Ross Island, 7m high, lies off the point. Pluck Point is located 2.5 miles N of Kildonald Point. A river with a prominent sandy beach on the N side and a castle on the S side, flows into the sound close WSW of the point.

Carradale Point (55°35'N., 5°27'W.) is located 6 miles NNE of Kildonald Point. A rocky ledge extends SE from the point and is marked by a lighted buoy. Carradale Bay, lying close W of the point and somewhat sheltered on the SE side by a small island, has depths of up to 15m in its outer part. A building and radio mast standing close NNW and NE, respectively, of the bay are conspicuous. A prominent castle stands on a hill 1.3 miles WSW of Carradale Point. A conspicuous bridge, which can be seen from seaward, is situated close ESE of the castle.

Anchorage can be taken by small vessels in the bay N of Kildonald Point in depths of 7 to 9m and may also be taken in the bay close SW of Pluck Point in depths of 9 to 11m, sheltered from N winds. Carradale Bay affords anchorage 0.5 mile SW of the point in depths of 9 to 13m.

Port Crannaich (Carradale Harbor) (55°36'N., 5°28'W.), 1.5 miles N of Carradale Point, affords shelter at a jetty, protected by a breakwater, with 37m of berthage for vessels of up to 3m draft. Herring fishermen work out of the harbor. Local knowledge is necessary. Anchorage for small vessels, N of the harbor entrance, can be taken in depths of 9 to 12.8m.

Fascairt Point lies 8 miles NNE of Port Crannaich. A marine farm, marked by lighted buoys, lies close E of the point. The

Cour, an isolated rocky shoal with a depth of 19.3m, lies on the W side of the sound about 3.2 miles S of the point. A ferry operated from Claonaig Bay, 1.8 miles NE of Fascairt Point, runs across the sound to Loch Ranza.

Skipness Point (55°46'N., 5°20'W.), the NW entrance point to Kilbrannan Sound, is fronted by foul ground marked by a lighted buoy. Two radio masts stand on the coast 1.2 miles NNE of the point.

Caution.—A submarine cable area, which is shown on the chart, extends SE for a distance of 3.5 miles from a point on the E shore of the Peninsula of Kintyre, about 1 mile N of Skipness Point. Mariners are advised to navigate with caution in the area.

Bute Sound—Inchmarnock Water

1.35 Bute Sound (55°45'N., 5°10'W.) is the broad channel leading NW between the NE side of Arran and the SW side of Bute Island. The sound, connecting Firth of Clyde with Inchmarnock Water, has a deep and danger-free fairway.

Tidal currents entering the sound are weak and irregular.

The SW side of the sound is steep-to. The NE side has a shore indented by several coves affording temporary anchorage. The W side of the sound extends from Cock of Arran, previously described, to the mouth of the Sannox River, 5 miles SW. A measured mile, marked by beacons, lies off the coast NW of the Sannox River. Mariners wishing to use the measured distance should contact the Commodore Clyde. For a description of the coast S of the Sannox River, see paragraph 1.11.

The E side of the sound extends from Garroch Head to Ardscalpsie Point, 4.3 miles NW. Whiting Bank, with a least depth of 20.1m, and Scalpsie Bank, with a least depth of 13.7m, lie about 1.5 miles W and 3.5 miles NW, respectively, of Garroch Head.

Inchmarnock Water (55°48'N., 5°15'W.) is a continuation to the NW of Bute Sound. This deep and clear passage leads to Kilbrannan Sound, Loch Fyne, and West Kyle.

Inchmarnock Island (55°47'N., 5°09'W.), lying on the E side of the passage, 1.2 miles NNW of Ardscalpsie Point, rises to an elevation of 56m. Inchmarnock Sound leads between the E side of Inchmarnock Island and the W side of Bute. The sound is free of dangers except for Shearwater Rock, with a least depth of 0.9m, lying in the S entrance about 0.7 mile W of Ardscalpsie Point. Vessels pass on either side of the rock, although depths of less than 12m are found close SSE of it.

Anchorage can be taken in sheltered St. Ninian's Bay located on the E side of Inchmarnock Sound in depths of 11m, sand. A breakwater extending 64m from the E shore of the bay, 0.4 mile E of St. Ninian's, has been established to protect a jetty which has not yet been constructed.

Kyles of Bute—Loch Riddon

1.36 Kyles of Bute consist of West Kyle and East Kyle, two navigable passages passing W and E of Bute Island and joining N of the island to form Loch Riddon.

West Kyle (55°52'N., 5°12'W.) is entered between Ardlamont Point (55°50'N., 5°12'W.) low, rugged, and the W side of Bute. The passage is constricted to a least width of

300m near its N end. Depths throughout the passage are ample for ocean-going vessels and the fairway is clear of dangers. Close E of Ardlamont Point lies a drying rock, marked by a lighted buoy, which marks the E end of a foul area. Lamont Shelf, with a least depth of 22m, lies 1.5 miles SW of Ardlamont Point.

Tides—Currents.—Tidal currents are weak, setting N and S with the flood and ebb, respectively. At springs, the current may attain a velocity of 2 knots in the narrows. The flood rounds the N extremity of Bute Island and sets SE through East Kyle.

Anchorage.—Anchorage by small vessels can be taken in a depth of 5m, sand, off the S side of Blindmans Bay 1 mile N of Ardlamont Point.

There is additional anchorage, exposed to S winds, about 300m offshore between Kames (55°53'N., 5°15'W.) and Tignabruaich (55°54'N., 5°14'W.). Piers extend offshore at these places. The T-head pier at Tignabruaich has a depth of 6.7m alongside. Local passenger vessels call regularly.

Black Farland Bay (55°54'N., 5°13'W.) provides anchorage for small craft at the E side of Kyle, protected from S winds, in depths of 3.7 to 7.3m.

Caution.—Submarines exercise frequently in West Kyle in an area S of Rubha Ban.

Submarine cables cross West Kyle and are shown on the chart.

An area within which anchoring and fishing are prohibited, has been established in the vicinity of Ettrick Bay 2 miles ENE of Ardlamont Point. Underwater obstructions exist in the area which is shown on the chart.

Marine farms have been established off the shores of Kyle.

Loch Riddon (55°57'N., 5°12'W.) extends N from Buttock Point (55°56'N., 5°11'W.), the N extremity of Bute. The inner half of the loch dries.

Caladh Harbor (55°56'N., 5°12'W.) is the name given to a very constricted anchorage formed by a blunt, small peninsula and an islet lying 0.5 mile NNW of Buttock Point. The islet is reef-fringed and has rocky heads close E. Beacons mark the N and S entrances to the anchorage which has depths of 3 to 5m.

1.37 East Kyle (55°54'N., 5°08'W.), from its junction with West Kyle, extends SE for 4.2 miles. The navigable channel has a width of about 0.3 mile, constricted to 0.1 mile in the vicinity of Colintraive Point (55°55'N., 5°09'W.).

Burnt Isles (55°56'N., 5°10'W.) lie just inside the NW entrance of East Kyle, almost obstructing the fairway. Two navigable channels, marked by buoys and beacons, lead between the isles. The S channel is narrow and tortuous. The preferred N channel has a width of about 25m with a least depth of 5.1m. The channel is straight and a vessels can steer through it passing between the buoys marking the dangers on either side. Caution is necessary as tidal currents may attain rates of up to 5 knots at springs, although they generally follow the direction of the channel. Velocities are greatest over the shallower parts. The currents from both kyles meet at the isles. Southeast of the Burnt Isles the currents are negligible.

Rubha Bodach (55°55'N., 5°10'W.), a promontory opposite Colintraive Point, is the site for a cross-channel ferry terminus.

Anchorage can be taken in depths of 11 to 13m, sand, N of the promontory and 350m E of the largest of the Burnt Isles.

Ardmaleish Point (55°53'N., 5°05'W.) and Strone Point, about 1 mile N, form the S entrance to East Kyle. A lighted buoy marks the shoal bank off Ardmaleish Point.

Caution.—Submarine cables extend across the channel and are shown on the chart.

Rothesay Sound—Loch Striven

1.38 Rothesay Sound (55°51'N., 5°02'W.), entered between Bogany Point (55°51'N., 5°01'W.) and Toward Point, previously described, leads NW to the entrance of East Kyle and Loch Striven. The fairway in the sound is deep and clear of dangers. Toward Bank, previously described, lies on the N side of the fairway entrance. Ardyne Point lies on the N side of the sound, 2.2 miles WNW of Toward Point.

Caution.—Ardyne Point Platform Construction Area (disused), the limits of which are best seen on the chart, lies offshore of Ardyne Point. Vessels are warned not to enter this area as swamped anchors and other underwater obstructions exist within the limits of this area.

1.39 Rothesay Bay (55°51'N., 5°03'W.), entered within Bogany Point, is deep as far as the shoals fringing the shores of the bay. Several church spires and the ruins of a castle are conspicuous in Rothesay, at the head of the bay.

Rothesay Harbor (55°50'N., 5°03'W.) (World Port Index No. 33370), at the head of the bay, consists of inner and outer tidal basins which partly dry and are used by small craft with drafts of up to 2.5m. A T-head pier about 250m in length, fronting the basin, has depths of 2.2 to 4.2m along its N side. There is a ro-ro terminal on the N face of Rothesay Front Pier.

Anchorage can be taken in suitable depths in the bay clear of mooring buoys, cables, foul patches, and small craft moorings. A stony spit, with depths of 14.6 to 18.4m, extends off the SE shore and provides poor holding ground. The W part of the bay has very good holding ground.

Kames Bay (55°52'N., 5°05'W.) is entered between Ardbeg Point, 1 mile SW of Ardnye Point, and Undraynain Point, 1 mile NNW. Ardbeg Point is fringed by drying reefs and fronted by shoals.

A measured distance, indicated by beacons and shown on the chart, lies N of Undraynian Point. Depths shoal from 31m in the entrance to drying flats at the head of the bay. East gales raise a heavy swell. Southwest winds prevail. There are deepwater and shoal moorings for yachts that frequent the bay.

A conspicuous tower stands 0.3 mile WNW of Ardbeg Point. Port Bannatyne, with a pier having a depth of 3m alongside, lies on the S side of the bay. An area, within which anchoring and fishing are prohibited, lies 0.2 mile N of the pier.

Anchorage.—A deep-draft designated anchorage area lies 0.7 mile N of Bogany Point and may best be seen on the chart.

Caution.—Submarine cables lie across the sound between Ardbeg Point and Ardyne Point.

A gas pipeline lies across the sound between Ardbeg Point and a point on the shore close ESE of Ardyne Point.

1.40 Loch Striven (55°55'N., 5°04'W.), deep and constricted, is entered between Ardyne Point (55°52'N.,

5°03'W.) and Strone Point. The loch, free of dangers, has steep-to shores backed by mountains. Violent wind squalls lash the loch. A small pier, marked by a beacon and known as Kings Landing, is situated on the E side of the loch, 4.8 miles N of Ardyne Point.

NATO Fuel Jetty is situated on the E side of the loch, 1.5 miles N of Ardyne Point. It extends 100m from the shore and has a face 65m long with mooring dolphins off each end. There is a least depth of 12.2m alongside the jetty. Mariners are cautioned that currents may set vessels off the jetty.

Caution.—Submarines exercise frequently, both surfaced and submerged, in Loch Striven.

An Experimental Area, the limits of which are shown on the chart, lies in the loch 1 mile N of Strone Point; anchoring is prohibited in the area and vessels should pass to the E of it. Mooring buoys, sometimes joined by wires, are occasionally laid in the area.

It is reported (1990) that marine farms are moored along the shores of the loch.

Loch Fyne

1.41 Loch Fyne (55°50'N., 5°19'W.) is entered between Skipness Point and Ardlamont Point, both previously described. Lower Loch Fyne extends about 14 miles to the entrance of Loch Gilp, where Upper Loch Fyne continues for another 23 miles to the head of the loch. Loch Fyne is deep, navigable throughout, and free of off-lying dangers. The shores are generally steep-to with fringing shoals. Local vessels serve the few minor ports in Loch Fyne. The E shore of the loch is indented by several small open bights with many islets and reefs lying off the points that form the bights. Temporary anchorage is afforded small vessels in the bays when the wind is offshore.

Sgat Mor (55°51'N., 5°18'W.), from which a light is shown, is a grassy islet lying on foul ground 3.7 miles NW of Ardlamont Point.

Portavadie (55°52'N., 5°19'W.), an abandoned oil platform construction site, is situated at the E side of the loch about 1.5 miles N of Sgat Mor.

1.42 East Loch Tarbert (55°52'N., 5°24'W.), on the W side of Loch Fyne, is entered between Rubha Loisgte (55°52'N., 5°23'W.) and Garbhaird, a promontory 0.4 mile NNW. East Loch Tarbert is constricted to a width of 0.7 mile within its entrance and then expands to a wide, inner basin partly encumbered with rocky islets and shoals. A church tower and hotel near the drying head of the loch are conspicuous.

There are least depths of 11m and 5.5m in the outer and inner parts of the lock, respectively. The intricate, preferred channel, leading SE of an islet lying in the center of the loch, has a narrow width and a least depth of 5.5m.

Anchorage can be taken within the outer entrance of the loch in depths of up to 34.7m, mud. There is no space to anchor within the inner loch.

Tarbert, a town, stands at the head of the loch. Fish Quay, on the SE side of the harbor, has a depth of 2.7m alongside. It was reported that the area off the quay had been dredged to a depth of 3m. Another pier, Passenger Wharf, with a depth of 5.5m alongside, situated about 0.2 mile WNW of Rubha Loisgte, is used for ferry traffic. The prominent ruins of Tarbert Castle, covered with ivy, are situated above this pier.

Barmore Island (55°53'N., 5°24'W.) is connected to the W side of the loch about 1 mile NNW of East Loch Tarbert. A foul area lies E of the island.

Loch Gilp (55°00'N., 5°26'W.), entered W of Eilean Mor (56°00'N., 5°24'W.), extends N for about 2.5 miles, with the inner mile being a drying flat. Several detached rocky areas lie 0.2 and 0.5 mile W and E, respectively, of the approach fairway to Loch Gilp.

Big Rock (55°58'N., 5°26'W.), 0.2 mile W of the fairway, has a least depth of 2.1m, with a 9.4m reef in the fairway NE of the rock.

Gulnare Rock (56°00'N., 5°26'W.), with a depth of 2.4m, lies off the W shore at the entrance of Loch Gilp. Rocks and rocky shoals extend NE across the entrance fairway from Gulnare Rock. The light is shown from a tower that stands on the head of a breakwater extending E from Ardrishaig. It is reported that the light is difficult to distinguish against the lights of the town. It is noted that several dangers, including Big Rock and Gulnare Rock, a rock with a depth of 3.4m, 1 mile SSE of the light, and a 4.9m patch lying off the SW end of the tongue on which Sgeir Sgalag lies, are covered by the white sector of Ardrishaig Light.

Duncuan Island (56°01'N., 5°26'W.), encircled by foul ground, lies almost 0.5 mile SE of Ardrishaig. Tidal currents are negligible in the loch. South winds can raise the water level; N winds lower the level. Landmarks include the spire of Ardrishaig Church, a white house 300m WNW of the church, and a farm 1 mile N of the church.

1.43 Ardrishaig (56°01'N., 5°27'W.) (World Port Index No. 33340), a town with a small harbor, stands at the S entrance of the Crinan Canal. A pier, with a depth of 2.4m alongside, is situated 100m NW of the breakwater. Depths of 5.5 to 8.2m exist off the pier and breakwater. Anchorage, sheltered from S winds, can be taken in depths of up to 7.3m about 0.2 mile ENE of the breakwater.

Caution.—Less water than charted was reported (1999) in the approaches to Ardrishaig.

Crinan Canal (56°01'N., 5°27'W.), the S entrance, marked by lights, extends from Ardrishaig to Loch Crinan, 9 miles NW. It has 15 locks and will accommodate vessels having a length of 26.8m, a masthead height of 29m, a beam of 6.7m, and a draft of 2.9m. By using the canal there is a saving of 85 miles over those vessels which round the Mull of Kintyre enroute to ports in the West Highlands. Canal transit time is 4 to 6 hours. The canal is closed on Sundays and navigation is prohibited at night. At times of low rainfall or canal maintenance, the maximum permissible draft may be temporarily reduced and the loch entrance opening times limited.

Vessels exceeding a draft of 2.5m are cautioned to stay in the middle of the canal to avoid the banks on both sides.

1.44 Upper Loch Fyne (56°00'N., 5°22'W.), entered between Liath Eilean (56°00'N., 5°23'W.) and the E shore of Loch Fyne, is 0.7 mile wide at the entrance, but becomes constricted at The Narrows, 1 mile within the entrance. The shores on both sides of the loch are fronted by rocks, reefs and shoals. Buoys mark those dangers lying close to the loch fairway.

At The Narrows, the channel is less than 0.5 mile wide and constricted by Otter Spit (56°01'N., 5°21'W.) on the E side, and Glas Eilean (56°01'N., 5°21'W.), an islet lying 0.5 mile N on the W side. Otter Spit, a drying flat of sand and gravel, is marked at its NW end by a lighted beacon; Glas Eilean at its S extremity by a light.

Otter Bay (56°01'N., 5°20'W.) indents the coast at the inner end of the spit. A ferry plies across this bay from a pier at the head of the bay to a quay at West Otter (56°02'N., 5°21'W.). Anchorage can be taken in Otter Bay in depths of up to 11m, N of the ferry pier. Good anchorage can be taken in depths of 12.8 to 14.6m in Port Ann, W of Glas Eilean.

Kames Bay (56°03'N., 5°20'W.), an open bight, affords anchorage in a depth of 15m, sand and gravel.

Loch Gair (56°04'N., 5°20'W.) is a small land-locked basin filled with shoals. A conspicuous tower stands at the SW side of the entrance. There is anchorage in a depth of 5m in the loch for small vessels.

1.45 Minard Narrows (56°06'N., 5°14'W.) is formed by two islets, rocks, reefs and shoals which constrict the fairway. Minard Castle is conspicuous on the shore SW of the narrows. North Rock, marked by a lighted buoy, lies at the NE extremity of foul ground. A lighted beacon marks the NW end of a gravel bank extending NW from the largest islet.

Sgeir an Eirionaich (56°06'N., 5°14'W.), a rock marked by a light, lies 0.5 mile off the E shore where the loch is marked by a castle in ruins. Vessels pass on either side of the rock. Big Shoal, with a depth of 5.2m, lies 0.6 mile NNE of the rock. The fairway from the entrance of Upper Loch Fyne to and above the narrows is free of dangers.

Inveraray (56°14'N., 5°04'W.), a town at the W entrance point of Loch Shira, has a T-head pier with depths of 2.8 to 3.1m alongside. A mooring buoy lies off the pier. A ferry plies between the pier and St. Catherine's, on the opposite shore.

Inveraray Castle, standing in the woods N of town, is conspicuous. High hills rising NNE of the castle are prominent.

Anchorage, open to SW winds and sea, can be taken about 0.2 mile SE of the pier at Inveraray. A vessel proceeding toward the head of Loch Fyne can find additional anchorage in the area abeam Ardkinglas House (56°15'N., 4°57'W.), a conspicuous building standing on the SE side of the loch.

Anchoring and fishing are prohibited in an area off the SE side of the loch, centered in position 56°12'N., 5°05'W.

Caution.—Upper Loch Fyne is used as a submarine exercise area.